GRAF 65000

User manual

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

GRAF 65000 (DG-G65)

GRAF 65000 comprises a suite of sophisticated Video & Graphic functions aimed at exploiting to the full the extensive possibilities of the SILVER.

Drawing functions

- Freehand
- Airbrush
- Eraser
- Standard zoom
- Binocular zoom
- Smearing brush

Layout functions

- Horizontal mirrors
- Vertical mirrors
- Horizontal+vertical mirrors
- Cancel mirrors / restore
- Cancel mirrors
- Digitize window
- Freehand copy
- Cut and paste
- Copy and paste

Geometric functions

- Circles
- Squares
- Rectangles
- Arcs
- Lines
- Points

Brushes

A selection of 18 brushes available for use with most drawing and geometric functions.

Color functions

- Clear screen
- Fill area
- Clear area
- Gradated palette
- Create custom palette
- Save palette to disk Ⓜ
- Load palette from disk Ⓜ
- Mixer palette

Video functions

- Full color digitizing
- Video inlay (not U.S.)
- Compressed digitizing

Miscellaneous functions

- Restart GRAF 65000
- Change cursor color
- 'Beep' on/off

Note that functions marked Ⓜ require the presence of the MEMORY EXTENSION 1/DISK (DG-150).

Demonstration disk

A three and a half inch demonstration disk is included with this cartridge. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

Click the PROJECT icon at the top of the menu.

Click the LOAD icon.

overwrite   (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO   When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY   Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 - introduction

About GRAF 65000

GRAF 65000 is the base application for the SILVER system. GRAF 65000 comprises an extensive suite of sophisticated Video and Graphic functions aimed at exploiting to the full the powerful features of the SILVER.

- GRAF 65000 comprises functions for drawing and painting freehand using 65000 colors, together with airbrush effects, zoom functions, smearing and erasing etc.

- Geometric functions include circles, rectangles, lines, arcs etc. and all geometric forms can be antialiased to remove 'step' effects on curves and diagonals.

- Color functions include filling and clearing of irregular forms, gradated and custom palettes (which can be stored on disk), gradated screen clear etc.

- There are layout functions for cut & paste, freehand copying, digitizing windows, as well as real time mirrors (horizontal, vertical or both).

- Video functions include real time digitizing and video compression in full color.

- Screen images can be saved to floppy disk (requires the MEMORY EXTENSION/DISK DG-150).

- Memory functions permit images to be saved, loaded, swapped and mixed with a choice of relative transparence, in the memory planes of the extension (requires the MEMORY EXTENSION/DISK DG-150).

What you will need

To access the basic functions of GRAF 65000
- SILVER (DG-100)
- Color monitor

To access disk storage and memory functions
- MEMORY EXTENSION/DISK (DG-150)

For digitizing video images in color
- Video camera/VCR etc. with separate RGB outputs...
- OR composite video source plus FADEC decoder (DG-110)

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

   ie :

2. Icons exclusive to the manual (depicting a physical action)

   ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

Click the tip of the pen on the tablet (then release).

Press the button on the barrel of the pen.

Click the tip of the pen on the tablet WITHOUT releasing.

Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :

Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).

This indicates that you should type something on the SILVER's keyboard.

The SILVER's menu

Selections are made by positioning the on-screen cursor (using the pen) over an icon from the menu, and clicking the tip of the pen onto the tablet. The menu is divided into 4 main zones (from top to bottom).

The first zone (top row) contains icons representing the applications that are installed in your system (GRAF 65000, LOGOTEXT, BUSINESS etc.). These icons are red colored. To select GRAF 65000 - click the icon in this zone. Note that if there are more than four applications installed, you will need to click the arrow that is displayed on the extreme right of this zone - and the following four will appear.

The second zone (next row down) contains icons representing the different function types (drawing, geometric, layout etc.). These icons are violet colored. If you wish to select (say) drawing functions - click the DRAWING FUNCTIONS icon (a pencil). This icon will be displayed in inverse video to indicate that the DRAWING type is selected.

The third zone (third and fourth rows) contains the functions themselves (blue icons).

When one of the functions is selected, a fourth zone appears (at the base of the menu) containing icons depicting the options or variables available within that function. These are green colored icons. The selected function as also displayed to the right of this zone (in inverse video) as a reminder.

Applications (zone 1)

Function types (zone 2)

Functions (zone 3)

Sub options (zone 4)

Freehand drawing

Click the DRAWING FUNCTIONS icon

Click the FREEHAND icon.

Click anywhere in the BLACK part of the menu...
the menu disappears and you have a blank screen
together with a palette of pre-programmed colors.

Press the tip of the pen down on the tablet. Move the pen
(without releasing the tip)... the on-screen cursor leaves
a trail of color wherever it passes.

Choosing a new color

Release the tip of the pen, then move the cursor over
one of the edges of the COLOR PALETTE. The shape of
the cursor becomes triangular (indicating that a color
can be chosen).

Click the pen by the color you wish to choose... you can
continue drawing using the new color.

Choosing a new brush

Call the menu (by clicking at the BASE of the tablet).
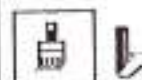
Click the BRUSHES icon... a selection of brush shapes
appears at the base of the screen.

Click one of the brushes offered.

Click in the black area of the menu to return to the
drawing.

The airbrush

Call the menu (by clicking at the base of the tablet), then
click the AIRBRUSH icon.

Click the INTENSITY icon... and choose the greatest of
the three strengths proposed.

Click in the black area of the menu and try drawing using
the AIRBRUSH, changing color and brushes as desired.

Standard zoom function

Call the menu and click the standard ZOOM icon.

Click in the BLACK area of the menu... the menu
disappears.

Click INSIDE the POSITIONING RECTANGLE (1/16th the size of the screen).

Move the rectangle to a part of the screen that you wish to see magnified (16x).

2

3

Click the pen to fix the rectangle in place...

...then click the pen OUTSIDE the area of the rectangle ...that area is magnified 16x as you enter zoom mode.

Try drawing in zoom mode.

Choosing a new color from your image...
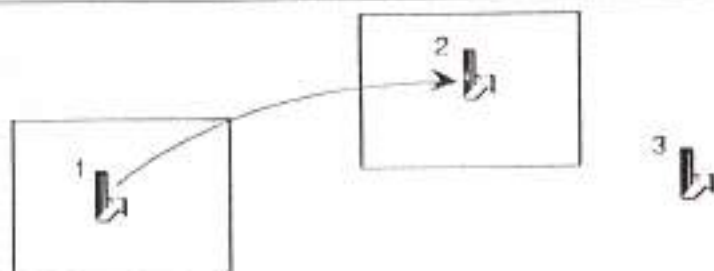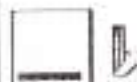
Press the button on the pen... the cursor becomes a square shape.

Keeping the button pressed, click the pen with the centre of the cursor on a point of your image that contains the color you want to sample.

You can now release the button and continue drawing using the new color.

Click at the BASE of the tablet to choose a new color from the palette or screen, or reposition the zoom area.

If you click at the BASE of the tablet a SECOND TIME, the menu returns and you can choose a new brush or select another function.

The 'smearing brush' function

Call the menu and click the SMEARING BRUSH icon.

The SMEARING BRUSH works by memorizing the texture beneath the brush and painting with that texture.

Choose the largest ROUND shaped brush.

Click the pen in the BLACK area of the menu... you will see your graphic image on the screen.

Click the pen (WITHOUT RELEASING THE TIP) over a part of the screen that contains some colors/textures.

Move the pen outward from that position (still without releasing the tip)... the colors are 'dragged' by the brush as it moves.

Using the texture somewhere else...

WITHOUT releasing the tip, PRESS the BUTTON on the pen (and keep it pressed).

Now release the tip (but KEEP the BUTTON PRESSED)

Move the pen to a different part of the screen...
you can draw with the same texture by clicking (without releasing) and moving the pen on the tablet.

Note that this function is at its most effective when used with digitized images incorporating natural forms and textures (close-ups of faces for example).

The eraser

Call the menu, and click the ERASER icon.

Exit from the menu (by clicking in the BLACK area).

You can erase (freehand) the drawing don... ...ring the previous function (in this case with the smearing brush).

The ERASER function is linked to the UNDO function.

If UNDO is ENABLED, the screen image PREVIOUS TO the last function will be intact and will show through where ERASER passes (see UNDO).

If UNDO is NOT ENABLED (or you do not have the MEMORY EXTENSION/DISK), the current BACKGROUND color will show through where the ERASER passes.

Binocular zoom function

Call the menu, and click the BINOCULAR ZOOM icon.

Exit from the menu (by clicking in the BLACK area).

A magnified 'ZOOM window' is superimposed over your image. Move the pen... you will see 2 cursors (one twice the width and height of the other). Move the SMALL cursor INSIDE the ZOOM window... it becomes a 'brush' (magnified) and a second brush (normal size) appears outside the window.

You can draw (magnified) within the window and monitor the pen trace (normal size) simultaneously.

You can choose a new color from the screen image (in the same way as for the STANDARD ZOOM function).

Changing the zoom position...

Move the brush OUTSIDE the zoom window (it becomes a small cursor).

Click the cursor on the point of your image you wish to magnify. If you wish, you can slide the pen (and the zoom window) before releasing the tip.
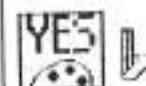
...ove the small cursor back inside the zoom window continue drawing.

If you click at the BASE of the tablet the menu returns and you can choose a new brush or select another function.

Clearing the screen

Call the menu, and click the DUSTBIN icon.

You have the option of clearing the screen in the current (default) background color, or choosing a new color with which to clear the screen.

Click YES (with choice of color).

The menu disappears... you can choose the color either from the screen image or from the color palette. The screen is cleared using the color you have chosen.

### Drawing rectangles

Click the GEOMETRIC FUNCTIONS icon.

Click the RECTANGLES icon.

Exit from the menu (by clicking in the BLACK area)... you will see a square shaped cursor superimposed over your image.

Click over one of the corners for the rectangle that you want to define.

Move the cursor to the opposite corner for the rectangle and click to fix that corner... the rectangle is defined.
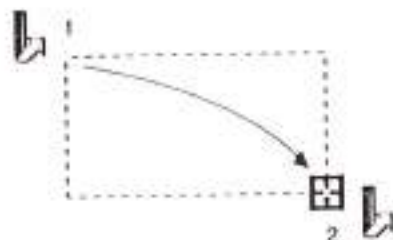
Repositioning the rectangle...

Click INSIDE THE RECTANGLE... move the pen... the rectangle moves also. You can reposition the rectangle anywhere on screen.

Click once more, the rectangle becomes fixed.

When you are happy with the size and position of the rectangle, click OUTSIDE THE RECTANGLE... it is drawn using the current brush and color.

The rectangle can be repositioned and drawn as often as you wish. You can select a new color or brush at any stage.

Pressing the button on the pen will give an 'elastic' rectangle whose centre remains fixed, and whose sides can be shaped by moving the pen horizontally or vertically.

To define a new rectangle, press the button on the pen a second time, and proceed as described above.

Drawing squares

The procedure is the same as for rectangles, the only difference being that horizontal and vertical proportions are always identical.

Points

The POINTS function operates in the same way as the FREEHAND drawing function, except that at each click of the pen one point only is drawn (even if the tip is kept pressed as the pen moves over the tablet).

Straight lines

Call the menu and click the STRAIGHT LINES icon.

Exit from the menu. You will see a square shaped cursor superimposed over your image. Position the cursor for the start of the line.

Click to fix the start of the line.

Move the pen... a 'rubber-banded' line appears, stretching from the end you have just fixed, to the cursor's position (which follows the pen).

Click the pen... the line is drawn using the current brush and color.

Move the pen... a NEW 'rubber-banded' line appears, stretching from the end you have just fixed, to the cursor's position (which follows the pen).

You can continue to draw lines in this way, changing brush or color at any stage.

To cancel the 'rubber-banded' line, press the button on the pen... you can now position the start of a new line anywhere you wish on the screen.

Antialiasing

For LINES and all the GEOMETRIC functions involving diagonals or curves, an ANTIALIASING option is available to produce forms without 'step' effects. When this option is selected only one brush size is available. In all other respects the function operates as normal. Try drawing some lines with and without antialiasing.
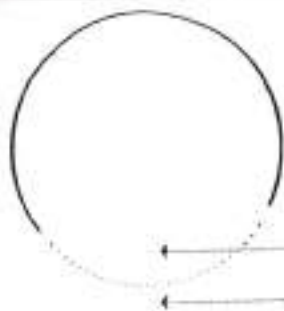
Click to fix the arc in position.

Repositioning the arc...

Click INSIDE THE 'CIRCLE'... (that is to say - inside the circle of which the arc would form a part)

inside the 'circle'

outside the 'circle'

Move the pen... the arc moves also. You can reposition the arc anywhere on screen.

Click once more, the arc becomes fixed.

When you are happy with the size and position of the arc, click OUTSIDE THE 'CIRCLE'... the arc is drawn using the current brush and color.

The arc can be repositioned and drawn as often as you wish. You can select a new color or brush at any stage.

Pressing the button on the pen will return you to the definition stage for the radius of the arc (the two ends will remain fixed in position).

To position the two ends and completely define a new arc, press the button on the pen a second time... the square cursor returns and you can recommence as described above.

Digitizing an image in color

Call the menu.

Click the VIDEO FUNCTIONS icon.

Note : For digitizing images in color you will require a decoder (FADEC DG-110) to convert to RGB the composite video signal output from the camera, video cassette recorder or video disk (unless that equipment already has separate Red, Green and Blue outputs)... see Quick reference section.

Click the DIGITIZE icon.

Exit from the menu (by clicking in the BLACK area). The camera/VCR image is displayed full-screen in color.

Click the pen... the image is frozen.

You can freeze or unfreeze the image by clicking the pen in the centre of the tablet (when the image is frozen the cursor will be visible over your image).

Zoom option...

Press the button on the pen... a portion of the screen is magnified 16x. Note that you can still freeze or unfreeze the image (by clicking the tip of the pen).

Press the button a second time to remove the ZOOM and return the display to normal size.
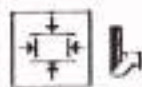
You can select the area to be magnified by calling the menu and clicking the ZOOM POSITION icon.

The ZOOM AREA rectangle is positioned in the same way as for the STANDARD ZOOM function.

Digitizing an image (1/4 size compression)

Call the menu.

Click the DIGITIZE COMPRESSION icon.

Exit from the menu (by clicking in the BLACK area)...

A rectangle appears over the screen image (1/4 of the total screen size) which represents the window in which the compression will be displayed.

Click INSIDE the rectangle... move the rectangle to the desired display location.

Click OUTSIDE the rectangle... the compression appears within the window.

Click the pen... the image is frozen.

You can freeze or unfreeze the image within the window by clicking the pen in the centre of the tablet (when the image is frozen the cursor will be visible over your image).

Zoom option...

Press the button on the pen... a portion of the screen is magnified 16x. Note that you can still freeze or unfreeze the image (by clicking the tip of the pen).

Press the button a second time to remove the ZOOM and return the display to normal size.

You can select the area to be magnified by calling the menu and clicking the ZOOM POSITION icon.

You can select the area to be magnified by calling the menu and clicking the ZOOM POSITION icon.

Video inlay (not available in US)

Call the menu.

Click the VIDEO ON/OFF icon.

Click the VIDEO ON icon (at the base of the screen).

When the VIDEO is ON, the color defined as the current background color will become 'transparent' and a live video image (input at the SILVER's V1socket - see Quick reference section) will be inlayed wherever that color appears within the graphic image.

It must be noted that unlike DIGITIZING this video image cannot be frozen or recorded, and is for live display only.

This function is NOT available in the US, and requires a color monitor equipped with a SCART Euroconnector.

Digitize window

Call the menu.

Click the LAYOUT FUNCTIONS icon.

Click the DIGITIZE WINDOW icon.

Exit from the menu... a square shaped cursor is displayed over your image.

This function will digitize an image in the same way as the standard DIGITIZE function, but the (full-screen) image will appear behind a window whose size and proportions are defined previously.

Position the cursor for one of the corners of the window, and click the pen to fix that corner.

Position the cursor for the opposite corner (you will see a 'rubber banded' rectangle forming)...
...click to fix that corner.

Note that you can 'unfix' the rectangle by pressing the button on the pen... then redefine it as described above.

Repositioning the window...

Move the cursor INSIDE the window (the cursor disappears), and click the pen... move the pen... the rectangle moves also. You can reposition the window.

Click once more, the window becomes fixed.

When you are happy with the size and position of the window, click OUTSIDE THE WINDOW... the digitized part of the (full-size) camera/VCR image that falls within the window is displayed.

Click the pen... the image is frozen.

You can freeze or unfreeze the image within the window by clicking the pen in the centre of the tablet (when the image is frozen the cursor will be visible over your image).

Copy and paste
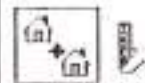
Call the menu and click the COPY & PASTE function.

Exit from the menu... a square shaped cursor is displayed over your image.

Cut out the AREA TO BE COPIED... by defining a rectangle (SOURCE) in the usual manner.

When the SOURCE rectangle (drawn with a dotted line) has been defined, the square cursor reappears, together with a second rectangle (drawn with a continuous line)... this is the DESTINATION for the COPY.

You can reposition the DESTINATION rectangle or the SOURCE rectangle by clicking INSIDE its area, moving it to a new position and clicking a second time.

When you are happy with the positions of the SOURCE and the DESTINATION rectangles, click OUTSIDE the area of both rectangles... the part of the screen within the SOURCE is copied within the DESTINATION area.

The two rectangles reappear, and you can reposition one or both rectangles to continue the copying process.

To redefine the shape and size of the SOURCE, press the button on the pen and repeat the procedure as described above.

Cut and paste
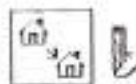
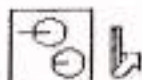Call the menu and click the CUT & PASTE function.

Exit from the menu... a square shaped cursor is displayed over your image.

Define and position the SOURCE area and position the DESTINATION area in the same way as you did for the COPY & PASTE function.

CUT & PASTE differs from COPY & PASTE in that after transfer of the image from SOURCE to DESTINATION the SOURCE area is replaced by the image that it contained BEFORE the PREVIOUS transfer (if UNDO is ON - see UNDO), or by the defined background color (if UNDO is OFF).

After the transfer, the SOURCE (dotted) rectangle assumes the previous position of the DESTINATION rectangle.

Freehand copy

Call the menu and click the FREEHAND COPY icon.

Choose a large round shaped brush.

This function operates in a similar way to a 'Pantograph' whereby two cursors at a fixed distance and orientation relative to one another can transfer image FREEHAND from one cursor to the other. The cursors can be thought of as a READ brush and a WRITE brush.

Exit from the menu and position the square cursor over a part of the image that you wish to copy FROM.

Click the pen... a brush-shaped cursor is fixed in position and the square cursor reappears.

Position the square cursor over the position in your image where you wish to copy TO... click the pen.

Move the pen over the tablet... both cursors are now mobile, but move in parallel relative to each other. The READ brush is identifiable by its 'hollow' representation of the current brush shape while the WRITE brush is represented by a cross-shaped cursor.

Try drawing with the two brushes... as you move the pen the image is transferred from one to the other.
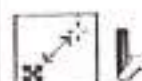
To reposition the BRUSHES relative to one another, call the menu and click this icon. You can redefine the relative positions as previously described.

An AIRBRUSH copy is also possible by clicking this icon (so that an AIRBRUSH icon is displayed in its place). You can select one of three spray intensities for the copy.
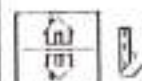
Mirrors

There are three types of mirrors available... horizontal, vertical and horizontal+vertical. When one of these functions is enabled all drawing and digitizing type functions will be affected.
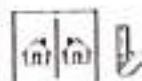
Call the menu and click the HORIZONTAL MIRRORS icon.

Try using some of the DRAWING functions while in HORIZONTAL MIRRORS mode.

Try similarly the VERTICAL MIRRORS icon...

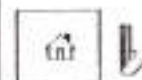... and the HORIZONTAL+VERTICAL MIRRORS.

Cancelling the mirrors

Two functions are available for cancelling the MIRROR effects, giving you the choice of keeping screen image as it is (mirrored) or restoring the unmirrored parts of the image.

This function cancels any mirrors but does not affect the image displayed on the screen.

This function cancels any mirrors and restores the parts of the image that were hidden during MIRROR mode.

Clear area

This function will clear an area of screen which is bounded by a UNIFORM color regardless of any colors/textures inside that boundary.

Using the FREEHAND function, draw the outline (uniform color) of an enclosed irregular shape over the rest of your image.

Call the menu and click the COLOR FUNCTIONS icon.

Click the CLEAR AREA function.

Click the BOUNDARY COLOR icon... the menu disappears and the square cursor is displayed.

Click the point of your image that you wish to define as the boundary color (click the boundary itself)... ...the menu returns.

> Point inside the zone to clear

Exit from the menu (by clicking in the BLACK area).

Select a color (from the palette) with which to clear the area.

Click INSIDE the enclosed boundary... ...the area is cleared using the color you selected.

Note : The boundary MUST be CLOSED or the color will 'leak out'. If this starts to happen, press the tip of the pen on the tablet until the CLEAR function halts. Then use the UNDO function (see UNDO).

Fill area

This function will flood an area of UNIFORM color, using a different color. For this reason it is not generally suitable for use with digitized images or images involving complex textures and non-uniform areas of color.

Call the menu and click the FILL AREA icon.

> Point inside the zone to fill

Exit from the menu by clicking the BLACK area... the menu disappears and the square cursor is displayed.

Select a color (from the palette) with which to clear the area.

Click WITHIN the area of color you wish to replace... ...the area is flooded with the color that you selected.

Note : You can halt the FILL by pressing the tip of the pen on the tablet until the menu reappears.

The color palettes

During most functions, access can be gained to the color palette management options, by clicking this icon which appears at the BASE of the menu.

The PALETTE MANAGEMENT icons appear.

This icon switches the PALETTE display ON or OFF.

This icon displays the palette at either the top or the bottom of the graphic display.

The HIGH COLOR/LOW COLOR icon indicates which of 2 pre-programmed levels of saturation will be used for the colors of the default palette.

GRAF 65000 has three palettes in memory at any time (standard, gradated and custom). The SWITCH PALETTE icon selects one as the current palette.

To define a gradated palette (that is to say - a smooth gradation between two selected colors), click this icon.

Defining a gradated palette...

Having clicked the icon shown above...

> Indicate start color

Exit from the menu... the square cursor is displayed.

Select the START color for the gradated palette by clicking the palette displayed at the base of the image, or from the image itself.

Remember that you can select a different palette from which to take your start color by clicking the SWITCH PALETTE icon from the menu (see above).

The menu returns...

> Indicate end color

Exit from the menu... the square cursor is displayed.

Select the END color for the gradated palette by clicking the palette displayed at the base of the image, or from the image itself.

A palette of gradations between the two selected colors is displayed on the screen.

The gradated palette can be saved to floppy disk... (see SAVING A PALETTE TO DISK).
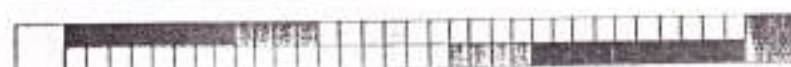
The mixer palette

The MIXER PALETTE offers the possibility to create a color by mixing primary elements. There are three mixing modes available. The MIXER PALETTE is available within all functions that use color.

Call the menu and click the MIXER PALETTE icon (at the base of the menu)... the menu disappears and the MIXER PALETTE is displayed.

mode — adjustment sliders — OK box

'GRIP' areas

The 'current' color (that is to say - the last color that was selected for use) is displayed in the 'OK' box on the right of the palette.
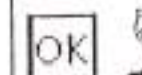
RGB mixing...

Select RGB mode (if not already selected) by clicking the third box from the left of the palette.

Move the adjustment sliders (Red, Green and Blue) by clicking on the right hand edge of each bar and sliding the pen to the right or left... you will notice that the positions of the bars determine the color that appears in the 'OK' box.

Now move the cursor over the OK box (without clicking) and press the button on the pen... the color changes to its complementary and the sliders adjust accordingly.

CMY (cyan, magenta, yellow) mixing...

Select CMY mode by clicking the second box from the left of the palette.

Move the adjustment sliders (Cyan, Magenta and Yellow) by clicking on the right hand edge of each bar and sliding the pen to the right or left... unlike RGB mode, this mode constitutes a subtractive color synthesis (with all bars to the left you obtain white, and with all bars to the right, black).

HLS (hue, luminosity, saturation) mixing...

Select HLS mode by clicking the box on the far left of the mixer palette.

Move the middle and bottom sliders completely to the right (for maximum luminosity and total saturation) and the top slider completely to the left.

Slowly move the top slider (hue) from left to right, noticing that OK box display scans through the pure colors of the spectrum. Primary and secondary colors are located at the notches along the slider.

red   yellow   green   cyan   blue   magenta   red
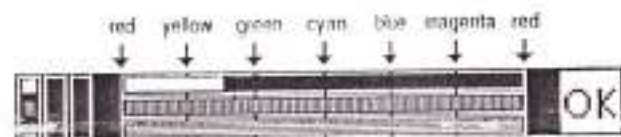
Move the bottom slider (saturation) slowly from right to left... the color in the OK box becomes desaturated... at the far left it becomes white.
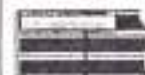
Move the middle slider (luminosity) slowly from right to left... the color in the OK box becomes becomes progressively darker and finally black.

Validating the mixed color...

When you are happy with the color that you have mixed, click the OK box... the menu returns, and the color you mixed now becomes the 'current' color.

Creating a custom palette

Call the menu (COLOR FUNCTIONS) and click the CREATE CUSTOM PALETTE icon.

Exit from the menu... your graphic image is displayed, together with the custom palette.

The triangular cursor can be positioned over any of the palette's compartments... click to place the current color (that you have just mixed) into the palette.

Press the button on the pen... the square cursor is displayed (which you can position anywhere on the screen).

Click a point on your image that contains a color you wish to place in the palette...
...the triangular cursor returns.

Place that color in the palette as before.

Continue taking colors from your image and placing them in the palette. Note that you can also use the MIXER PALETTE from within the function to create colors one by one for the custom palette.

Saving a palette to disk
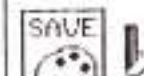
Call the menu and click the SAVE PALETTE icon.

Make sure that you have a prepared disk in the MEMORY EXTENSION/DISK drive.

Which palette ?

Both the gradated palette and the custom palette can be saved to disk... click the CUSTOM palette icon.

Name of palette to save :

Type the name for the palette (12 characters maximum).

Press RETURN (or click the pen)... the palette is saved to disk.

Palette saved

Note that when a palette is saved to disk, the suffix '.PAL' is added automatically to the file name.

Loading a palette from disk

Call the menu and click the LOAD PALETTE icon.

Make sure there is a disk in the drive, on which you have already saved some custom or gradated palettes.

Which palette ?

Here we wish to load a custom palette...
...click the CUSTOM palette icon.

After a few moments, a list of all the files on the disk appears. Move the cursor over the PALETTE file you wish to load (indicated by the suffix '.PAL') ... and click the pen.

The palette is loaded into memory, and displayed superimposed over your graphic image.

Selecting a color from the screen

For every function involving the use of color, that color can be selected either from one of the palettes or from the screen image itself. During the function, the icon is displayed at the base of the menu.

Click the SELECT COLOR FROM SCREEN icon... the menu disappears.

Click a color from the screen image itself (or from the palette)... the color is selected and you can continue with the function.

Gradated background

This function clears the entire screen with a vertical gradation between two selected colors.

Call the menu and click the GRADATED BACKGROUND icon.

Select top color

Exit from the menu (by clicking in the BLACK area).

Click a point on your image or from the palette which contains the color that you want for the top of the gradation.

Select bottom color

Exit from the menu (by clicking in the BLACK area).

Select a color (from the image or palette) for the bottom of the gradation... the screen is cleared with a color gradation between the two selected colors.

UNDO

UNDO will restore the screen image to its state BEFORE the last function that was selected. In order for the UNDO to operate the MEMORY EXTENSION/DISK (DG-150) must be connected to the system. In addition, the UNDO must be ENABLED (and memory reserved for temporary screen storage). Initially UNDO is ENABLED, and the UNDO icon can be found in all function types.

Assuming that you have just cleared the screen using the GRADATED BACKGROUND function...

Call the menu and click the UNDO icon... the image (previous to the screen being cleared) is restored and the menu returns.

Click the UNDO icon a second time... the gradated background is restored and the menu returns.

Disabling the UNDO function

The UNDO function requires the same memory space as one screen image. For certain manipulations it may be desirable to disable the UNDO function. In addition this memory space may be required for use by the memory plane functions etc...

Call the menu, and click the MEMORY PLANE FUNCTIONS icon.

Click the UNDO ON/OFF icon.

The UNDO function can be switched ON or OFF (the UNDO plane is kept intact so that at a later stage the image it stores can be recalled by re-enabling the function and calling UNDO).

A further option allows you to 'kill' the UNDO plane and release that memory for use by other functions.

Note that the UNDO ON/OFF function affects the operation of the ERASER function (see ERASER).
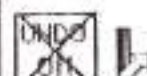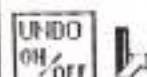
Saving the screen image in a memory plane

It is possible to store the current screen image into the memory of the SILVER MEMORY EXTENSION. It should be remembered that unlike disks this is not a permanent means of storage... when the power is turned off the images will be lost.

Click the SAVE TO MEMORY PLANE icon.

If there are any empty memory planes, the current graphic image will be stored. If all the memory planes already contain images... the menu disappears and the available planes are superimposed over the current image with their contained images represented in miniature.

Click the square shaped cursor on the memory plane in which you wish to save your image... the image is saved and the menu returns.

Loading an image from a memory plane

Click the LOAD FROM MEMORY PLANE icon.

Providing there are images stored in memory, the menu disappears and the memory planes are superimposed over the current image with their contained images represented in miniature.

Click the square shaped cursor on the memory plane which you wish to load to the current screen... the image is loaded and the menu returns.

Swapping images with a memory plane

Click the SWAP WITH MEMORY PLANE icon.

This is similar to LOADING an image from memory except that the current screen image is swapped with that in the selected memory plane.

Mixing the current image with a memory plane

This function mixes the current screen image with that contained in one of the memory planes. A choice of relative translucence of the two images is offered.

Click the MIX IMAGES icon.

The menu disappears and the memory planes are displayed over your image as before... click the plane containing the image you want to mix with the current graphic image... the menu returns...

Which power ?

The options offered relate to the power of the CURRENT image relative to the memory plane image. For an equal mix, click 1/2... the two images are mixed.
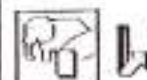
Deleting a memory plane

Click the DELETE MEMORY PLANE icon.

The menu disappears and the memory planes are displayed over your image as before... click the plane that you want to delete.

The representation of that plane is removed from the display and the memory is released for common use.

You can delete one of the remaining planes or click at the base of the tablet to return to the menu.

Clearing all memory

Click the CLEAR ALL MEMORY icon.

All memory
will be erased.
Are you sure ?
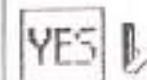
Click YES... all memory is cleared and the memory plane images are destroyed.

List memory

Click the LIST MEMORY icon.

A description of the system's memory usage is displayed together with percentages for each of these elements, and the percentage of memory still free.

Saving the screen image to disk

Make sure there is a prepared disk in the MEMORY EXTENSION/DISK drive.

Click the DISK FUNCTIONS icon.

Click the SAVE icon... you are asked for the...

Name of picture to save :

Type a name for the image file to be saved on disk (16 characters maximum).

Press RETURN (or click the pen). When the image has been saved on disk the menu returns...

Picture saved

Loading an image from disk

Click the LOAD icon... a list of image files stored on disk appears (each file accompanied by a number).

Click the image number you want to load... the image is loaded to the screen and the menu returns...

Picture restored

Loading an image from disk to memory plane

This function operates in the same way as the normal LOAD (to screen), except that the image is loaded directly into one of the memory planes (and does not appear on screen).

Click the LOAD icon... a list of image files stored on disk appears (each file accompanied by a number).

Click the image number you want to load. If all the memory planes already contain images you will be required at this stage to select the plane into which to load the image...

> Please wait.

The image is loaded directly into the memory plane...

> Picture restored

Deleting a file from disk

Click the DELETE icon... a list of all files contained on the disk is displayed.

> Which name ?

Click the file name that you want to delete.

> (file name)
> will be erased.
> Confirmation ?

Click YES... the file is deleted from the disk and the list of remaining files appears. You can select another file for deletion...

...or click at the base of the tablet to call the menu.

To obtain a catalog of disk files

Click the CATALOG icon... the disk preparation date, disk name and a list of all files stored on disk appear.

Click to return to the menu.

Renaming a file on disk

Click the RENAME icon... a list of all the files contained on the disk is displayed.

> Which name ?

Click the file name that you want to change.

> Rename :
> (file name)
> as :

Type the new name for the file...

... and press RETURN.

> (file name)
> will be renamed as :
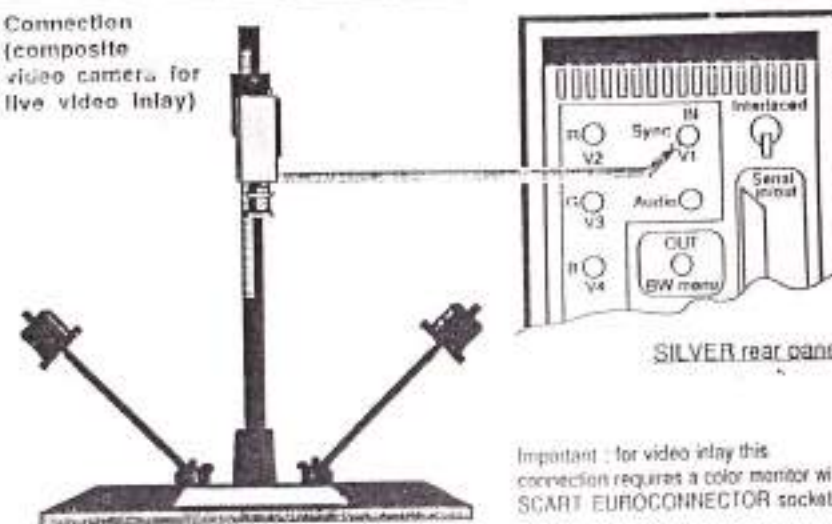> (new file name)

Click YES... the file name is changed....

> (file name)
> has been renamed
> (new file name)

Chapter 3 - quick reference section

Quick reference section

Note that for convenience, functions requiring the presence of additional hardware or software are included in this section (GRAF 1, GRAF 2, the MEMORY EXTENSION/DISK DG-150 and the PC/AT LINK and software DG-140/145 + DG-IB1). The required addition is indicated where applicable (**M** indicates MEMORY EXTENSION/DISK and **L** indicates PC/AT LINK).

Airbrush (spray intensity)	For any of the functions involving the AIRBRUSH or TRANSLUCENT AIRBRUSH effect, the intensity of the spray can be selected from a choice of three using this icon.	
Airbrush (standard)	Sprays an airbrush effect (random) over the underlying image, with access to a selection of brushes and 3 spray intensities, as well as all the normal color/palette functions.	
Airbrush (translucent) GRAF1 function	Paints the image beneath the cursor with a flat (even) coat of color. Access is available to a selection of brush shapes and 3 spray intensities (levels of translucence), as well as all the normal color/palette functions.	
Antialiasing	This is a technique whereby curves and diagonals are 'smoothed' to remove the stepping effect resulting from the limited definition in a digitally generated image. Intermediate colors are calculated and generated (in the zone between the form and background).	
Antialiasing (ON/OFF)	For any function offering the option of antialiased lines (CIRCLES, ARCS, STRAIGHT LINES etc.), this icon switches between antialiased and non-antialiased modes.	
Arcs	For drawing arcs of a circle. The two ends of the arc are fixed, then the centre is determined by positioning the cursor. The full range of brush and color options is available and arcs may be antialiased.	
Beep ON/OFF	Many of GRAF 65000's operations are accompanied by a 'BEEP' sound used as a warning or an indication that a selection has been made or an action carried out. The beep can be cancelled or validated by clicking this icon.	
Blending brush GRAF1 function	This function (which amounts to a freehand antialiasing) blends the colors of the image beneath the cursor. The effect is that any hard edges become de-focused. This function is very useful for blending in an image that has been 'cut out and transferred'.	
Brushes	A selection of 18 brushes is available for use with most of the drawing and geometric functions of GRAF 65000.	

Catalog files (on disk)	The CATALOG function will list any image files present on floppy disk in the MEMORY EXTENSION/DISK unit.	
Circles	For drawing circles. The full range of brush shapes/sizes is available, together with an antialiasing option.	
Clear area	Using this function, you can clear an area (any shape) which is bounded by a single color. The area can be cleared using a color that is the same or different to that of the boundary.	CLEAR
Clear area (boundary)	When using the CLEAR AREA function, the boundary color can be defined using this icon.	
Clear memory M	Clears all the memory planes of the SILVER and MEMORY EXTENSION units.	
Clear screen	The DUSTBIN icon is used for clearing the screen in the color defined for the background. On clicking this icon, you are given the option to select a new background color before clearing the screen.	
Color functions (function type)	This family contains functions concerned with manipulation of the color, such as FILL, CLEAR, CUSTOM PALETTE etc... (GRAF 1's freehand COLORIZE function appears in this group).	
Colorizing (freehand) GRAF1 function	The image beneath the brush is painted with the current color without the contrast of the image being altered.	
Connection (composite video camera for live video inlay)		

SILVER rear panel

Important : for video inlay this connection requires a color monitor with SCART EUROCONNECTOR socket.

Connection (color video camera)

(Unless your color camera has an RGB output), the composite signal from the camera must be decoded (converted to Red, Green and Blue, plus sync) for digitizing video images in color.
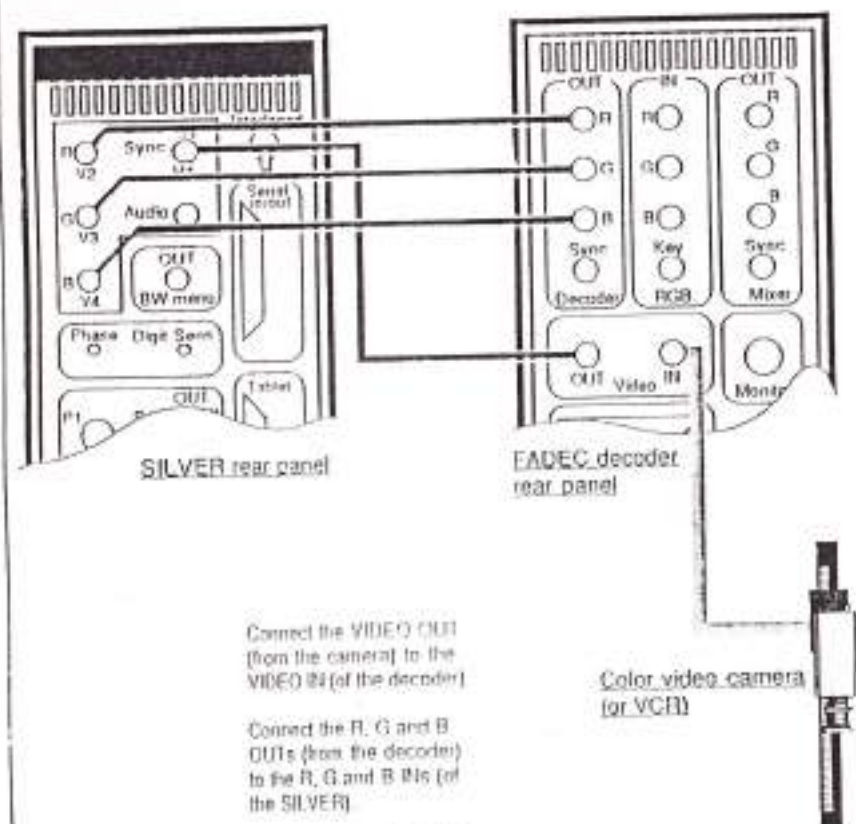
SILVER rear panel

EADEC decoder rear panel

Connect the VIDEO OUT (from the camera) to the VIDEO IN (of the decoder)

Connect the R, G and B OUTs (from the decoder) to the R, G and B INs (of the SILVER)

Connect the VIDEO OUT (from the decoder) to the SYNC IN (of the SILVER)

Color video camera (or VCR)

Copy & paste

Permits a rectangular area of the image to be defined and subsequently reproduced elsewhere on the screen. The rectangular area to be copied (source) will not be destroyed by the transfer.

Copy and paste (with re-sizing)

GRAF2 function

Permits an area of screen to be defined and subsequently reproduced elsewhere (or at the same location) with variable size and horizontal and vertical proportions. The source and destination areas are defined by means of rectangles and are not restricted in terms of maximum size.


Copy and paste (with rotation)

GRAF2 function

Permits an area of screen to be defined and subsequently rotated through any angle and reproduced elsewhere on screen (or at the same location). The maximum area that can be rotated using this function is 7000 points (roughly 1/14 of the total screen area).

Copy (freehand)

Using this function you can copy 'freehand' from one part of the screen to another. The function can be likened to a 'Pantograph'. Two cursors move in unison (a READ cursor and a WRITE cursor). As the pen moves over the tablet the image is copied from the READ to the WRITE cursor. The usual selection of brushes is available, together with an AIRBRUSH COPY option...
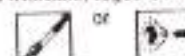
Curser color

The default color of GRAF 65000's graphic cursor can be changed by clicking this icon.

Cut & paste

Permits the transfer of a rectangular area of the screen to another location. After the transfer the SOURCE area will EITHER be replaced by the current BACKGROUND COLOR (if the MEMORY extension is NOT connected or UNDO is NOT enabled), OR it will be replaced by the image existing BEFORE the previous transfer (if UNDO IS enabled).

Delete file (from disk)

The DELETE function will delete an image file from floppy disk in the MEMORY EXTENSION/DISK unit.

Digitize (black & white)

GRAF1 function

Digitizes images from a video camera or VCR, to 32, 16, 8, 4 or 2 grey levels. Colors may then be assigned to each of the grey levels using an RGB color mixer. This colorizing effect may be performed on 'live' video, or frozen as a graphic screen.

Digitize (compressed)

Produces a compressed (1/4 size) digitized image emanating from a video camera or video cassette recorder, in full color. Unless the camera or VCR has RGB output, a decoder will be required to convert the video signal to RGB for digitizing (see CONNECTION - COLOR CAMERA). There is a ZOOM option (16x) within this function. In both zoom and normal mode it is possible to freeze and unfreeze the compressed image by clicking the pen on the tablet.

Digitize (full color)

Digitizes an image from a video camera or video cassette recorder, in full color. Unless the camera or VCR has RGB output, a decoder will be required to convert the video signal to RGB for digitizing (see CONNECTION - COLOR CAMERA). There is a ZOOM option (16x) within this function. In both zoom and normal mode it is possible to freeze and unfreeze the digitized image by clicking the pen on the tablet.

Function	Description	
Digitize window	This function is used to digitize an image from a video camera or VCR and display that image behind a definable window on screen.	
Disk functions (M)	This function group contains functions for LOADING, SAVING, DELETING, CATALOGING and RENAMING of graphic images to disk. The MEMORY EXTENSION/DISK (DG-150 (M)) is required in order to use these functions.	
Drawing functions	This family contains functions concerned with drawing, such as FREEHAND lines, AIRBRUSH, SMEARING brush, 2 ZOOM functions, ERASER, etc...	
Eraser	If the MEMORY extension is connected and UNDO is enabled, the screen image (before the last function selection) which lays beneath the cursor's position, will be restored as the eraser passes. If UNDO is NOT enabled, the current background color will be restored where the eraser passes.	
Exit	Click this icon when you wish to exit from a function or option selection (with or without having made any choices)	
Fill area	An area of UNIFORM color can be flooded by a new color. Note that this function differs from the CLEAR AREA function in that it is color to be replaced that defines the area to fill and NOT the boundary color.	
Freehand	Lines drawn FREEHAND on screen, with access to different brushes, colors etc	
Freehand (antialiased) [GRAF2 function]	The presence of GRAF 2 adds an antialiasing option to the GRAF 6S/000 FREEHAND function.	
Geometric functions	This family contains functions such as CIRCLES, ARCS, straight LINES, RECTANGLES etc...	
Gradated background	Clears the screen with a vertical gradation between two selectable colors.	
Hard disk (delete) (L)	Deletes a file from the hard disk of a PC/AT or compatible (connected to the SILVER via the PC/AT LINK)	
Hard disk (load) (L)	Loads to the screen an image from the hard disk of a PC/AT or compatible (connected to the SILVER via the PC/AT LINK).	
Hard disk (save) (L)	Saves the current screen image to the hard disk of a PC/AT or compatible (connected to the SILVER via the PC/AT LINK)	
Hard disk (select drive) (L)	Selects a disk drive (A to F) for use by the PC/AT LINK for saving SILVER images to PC/AT disk (hard or floppy).	
Layout functions	This family contains functions concerned with manipulation of the realtime MIRRORS and DIGITIZE WINDOW function, together with COPY/CUT & PASTE and freehand COPY functions. (Note that the cut & paste with ROTATION and RESIZING functions of GRAF 2 are also in this group).	
Lines	For drawing straight lines. The full range of brush shapes/sizes is available, together with an antialiasing option.	
Lines (translucent) [GRAF1 function]	Identical to the standard LINES function except that the lines are translucent (as if drawn using the TRANSLUCENT AIRBRUSH function), and as such, one of three levels of translucence is selectable.	
Load image (from disk) (M)	The LOAD function is used to LOAD a graphic image from a floppy disk in the memory extension.	
Memory (list) (M)	This icon gives information on the percentage of memory used for the SILVER and MEMORY EXTENSIONS.	
Memory plane (copy & paste) [GRAF1 function] (M)	An rectangular portion of screen image can be copied to an image stored in one of the memory planes of the extension.	
Memory plane (delete) (M)	Allows one of the memory planes to be cleared (and the memory space used by that plane released for use).	
Memory plane (load from disk) (M)	Allows an image to be loaded from floppy disk (in the MEMORY EXTENSION/DISK) directly into one of the available memory planes (without passing via the screen of the monitor).	
Memory plane (load from hard disk) (M)(L)	Allows an image to be loaded from the hard disk (of a PC/AT via the PC/AT LINK) directly into one of the available memory planes (without passing via the screen of the monitor).	
Memory plane (load from....) (M)	A graphic image already stored in one of the MEMORY EXTENSIONs memory planes can be restored to the current graphic screen.	
Memory plane (mix images) (M)	A graphic image already stored in one of the MEMORY EXTENSION's memory planes can be mixed with the current screen image. A choice of relative translucence is available (25% or 50%).	
Memory plane (save to...) (M)	The current screen image can be stored into one of the available memory planes of the MEMORY EXTENSION.	

Memory plane (swap images)	**M** A graphic image already stored in one of the MEMORY EXTENSION's memory planes can be swapped with the current screen image (the memory plane image will replace the current image and the current image will be stored in the memory plane).
Memory plane functions	**M** This family contains functions for storing and manipulation of images in the memory planes of the MEMORY EXTENSION. The MEMORY EXTENSION/DISK (DG-150 **M**) is required in order to use these functions.
Menu (arrow)	The 'ARROW' shaped icon appears at the top right of the menu in cases where there are more than 4 applications installed in the SILVER system. To scan through the available applications you can click this arrow .. the next four application icons will be displayed at the top of the menu (and so on ..).
Menu (list)	The 'LIST' icon is situated at the top left of the menu. It gives access to information concerning any software cartridges installed in the application slots of the SILVER and extension units. If there are more than 9 installed, a further click of the pen will display information for the remaining cartridges.
Menu display (applications)	The uppermost line of the menu contains icons depicting any applications installed in your system. These icons are displayed in RED. The currently selected icon (GRAF 65000 in this case) is displayed in inverse video.
Menu display (function types)	The 2nd line of the menu contains the families or function types for the selected application. These icons are displayed in VIOLET. The currently selected 'type' icon is displayed in inverse video.
Menu display (functions)	The 3rd and 4th lines of the menu contain the functions within the selected function type. These icons are displayed in BLUE.
Menu display (variables)	The 5th and 6th lines of the menu contain any variables or sub options for the selected function. These icons are displayed in GREEN.
Mirrors (cancel)	The realtime mirror effect is cancelled WITHOUT any changes in the current screen image.
Mirrors (cancel/restore)	The realtime mirror effect is cancelled and the remainder of the screen image is restored.
Mirrors (horizontal)	If this function is enabled, any drawing, geometric or digitizing type function performed in the left half of the screen will be mirrored in the right half of the screen.
Mirrors (vert./horiz.)	If this function is enabled, any drawing, geometric or digitizing type function performed in the upper left quarter of the screen will be mirrored in the other three quarters of the screen.

Mirrors (vertical)	If this function is enabled, any drawing, geometric or digitizing type function performed in the upper half of the screen will be mirrored in the lower half of the screen.
Miscellaneous functions	This family contains general functions not specifically related to any of the other function groups (CURSOR COLOR, warning BEEP ON/OFF, RESTART etc ..). Functions for SAVING, LOADING and DELETING on HARD DISK are also found in this group.
Palette (custom)	A custom palette can be created by clicking this icon. It can be filled with colors taken from any of the standard or gradated palettes, or from the screen image itself.
Palette (default)	The standard default palette consists of 64 pre-programmed colors. Note that the general layout of the palette is identical for the default, custom and gradated palettes.

Defined background color — 64 colors — Current defined drawing color

Palette (gradation)	A palette consisting of a smooth gradation between two colors may be created using this function. The start and end colors for the gradation are selectable from any of the existing palettes or from the screen image itself.
Palette (high/low color)	The standard pre-programmed palette can be displayed using one of two saturation level settings. 'HIGH COLOR' indicates that the colors will be completely saturated, 'LOW COLOR' is slightly less saturated.
Palette (load from disk)	A custom palette already saved on disk can be LOADED into the SILVER by using this function.
Palette (mixer)	The mixer palette option offers the possibility of creating or modifying a color either by mixing primary color levels, or using the HLS system (Hue, Luminosity, Saturation).

mode — adjustment sliders — OK box

'GRIP' areas

| Palette (mixer - contd.)	The horizontal sliders are used to adjust each of the three variable components. The 'OK' box indicates the resulting color. Pressing the pen's button over the OK box will change the color to its complimentary. Clicking this box will validate the slider settings. Click the 'GRIP' areas to move the palette to a new screen position.	
	The mix mode is selected by clicking one of the three boxes on the right side of the color bars.	
	In this mode, the sliders represent the levels of RED, GREEN and BLUE and are used for additive color synthesis.	
	In this mode, the sliders represent the levels of CYAN, MAGENTA and YELLOW components for a subtractive color synthesis.	
	HLS mode... the top slider represents hue (chrominosity - the 'notches' indicate 'pure' color positions), the middle & bottom sliders represent luminosity & saturation levels.	
Palette (ON/OFF)	This icon gives the option of either displaying or concealing the current palette during the operation of functions.	
Palette (save to disk)	A custom palette or gradated palette can be saved to floppy disk in the MEMORY EXTENSION using this function.	
Palette (type)	This icon selects one of the following three palette types as the current palette... standard, gradated or custom.	
Palette (up or down)	The current palette can be displayed at the top or the bottom of the graphic image by clicking this icon.	
Palette options	This icon gives access to the management of the color palettes... choice of palette, gradations, display status, etc. This icon is used throughout the SILVER range of applications.	
Pen	The pen (or stylus) involves three elements essential to the manipulation of the on-screen cursor. The first of these is the pen's position relative to the surface of the tablet. The other two are the button and the tip of the pen.	

blue button

tip
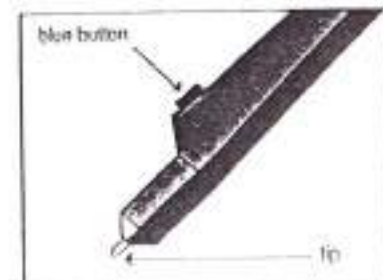
By using a combination of pressing the button on the barrel of the pen and clicking the tip of the pen on the tablet, it is possible to perform the following manipulations:

- Click (and release)
- Click (without releasing)
- Press the button

| Points	This function is used to draw points one after the other on screen using the current brush shape.	
Prepare disk	Before saving/loading etc. images, palettes etc. to a floppy disk in the MEMORY EXTENSION/DISK for the FIRST TIME, the disk must be 'prepared'. Preparation will destroy ALL files previously stored on the disk. This function is contained in the MEMORY program and NOT GRAF 65000.	
Rectangles	For drawing rectangles. The full range of brush shapes/sizes and color/palette options is available.	
Rename file (on disk)	By using the RENAME function you can give a new file name to any image file stored on floppy disk in the MEMORY EXTENSION/DISK unit.	
Restart	On selecting this function, all GRAF 65000 variables are set to their default values and GRAF 65000 reverts to its initial state.	
Save image (to disk)	The SAVE function is used to SAVE the SILVER's current screen image to floppy disk.	
Select color (from screen)	When this icon is clicked, the current color can be chosen by clicking over any point on the screen image (or palette).	
Smearing brush	Smears the colors of a drawing or digitized image. Screen colors/textures may be either smeared out from their original position, or transferred to a new position elsewhere and used to draw/paint with.	
Squares	For drawing squares. The procedure is identical to that of the RECTANGLES function.	
Undo	This function will cancel any modification made to the screen image since the previous function selected.	
Undo (kill...)	Disenables UNDO and kills the UNDO memory plane so that it may be used for storing images etc...	
Undo ON/OFF	In order for the UNDO function to operate, memory must be made available for temporary storage purposes. Click this icon to ENABLE or DISABLE the UNDO plane.	
Video functions	This family contains functions concerned with digitizing (COLOR DIGITIZING and COMPRESSED DIGITIZING)	
Video ON/OFF	This function allows a live video image (input at V1) to be displayed inlayed within the defined background color. Note: this function not available for NTSC (US) and necessitates a monitor with SCART EUROCONNECTOR.	

View GRAF1 function	Permits the menu display to be temporarily removed in order to view the underlying graphic image. Note that this icon will appear in all of the function groups for most SILVER applications.	
Zoom **(binocular)**	Displays a window containing a part of the image magnified 3x horizontally and vertically. You may draw within the window (a second cursor will simultaneously draw normal scale), or reposition the window over the image (by clicking outside the window).	
Zoom **(multi-function)** GRAF2 function	A zoom mode giving access to all the usual GRAF 65000 funtions as well as those of most of the SILVER's applications. On entering zoom mode, a section of screen is magnified 16x. You can continue to work as in normal mode. Clicking this icon a second time will reduce the current image and reintegrate it with the previous screen.	
Zoom **(standard)**	Magnifies a section of the screen by a factor of 4 horizontally and vertically, to be displayed full-screen. In this mode, you have the usual access to brush shapes and colors.	

ANIMATION 1
User manual

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

ANIMATION 1   (DG-AN1)

ANIMATION 1 offers all the functions needed to produce full color animation line tests, capable of displaying an animated sequence of 16 images occupying 1/16th of the monitor screen area.

Main functions

Draw storyboard		Copy frame	
Digitize image		Swap frame	
Use stored image		Clear frame	
Insert frame		Delete frame	
Clear screen		Restart	

Sequence execution functions

Step by step		Animation length	
Continuous		Display position	
Speed		Video inlay on/off (not US)	

Disk functions   ⓜ (MEMORY EXTENSION 1/DISK required)

Save image		Disk catalog	
Load image		Delete disk file	
Rename disk file		UNDO last function	

Demonstration disk

Certain application cartridges are accompanied by a demonstration disk. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

PROJECT — Click the PROJECT icon at the top of the menu.

LOAD — Click the LOAD icon.

overwrite — (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO — When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY — Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 - introduction

About ANIMATION 1

Animation 1 is an economical line test tool for professional animators. Here are just some of the possibilities...

* Animated sequences of 16 images, occupying 1/16th of the monitor screen area.

* Full editing facilities.

* Speed is variable from 12 to 30 frames per second (USA) or 10 to 25 frames per second (europe).

* The source material can come from digitized video images, or images drawn or processed using GRAF 65000 or any other SILVER application.

What you will need

* SILVER (DG-100) plus color monitor

* Color VIDEO CAMERA with RGB OUTPUT
  or
* Color composite VIDEO CAMERA + DECODER (FADEC DG-110)

* CAMERA STAND and FLOOD LIGHTING

About the manual

The manual is divided into two main sections - a 'guided tour', together with some useful advice, and a 'quick reference' section (covering most of the ANIMATION functions in alphabetical order).

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

ie :

2. Icons exclusive to the manual (depicting a physical action)

ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

Click the tip of the pen on the tablet (then release).

Press the button on the barrel of the pen.

Click the tip of the pen on the tablet WITHOUT releasing.

Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :

Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).

This indicates that you should type something on the SILVER's keyboard.

Chapter 2 - a guided tour

Before you begin filming it is useful to plan your scenario on paper. This is best done in the form of a "storyboard" and is the same principal as is used by ANIMATION 1 to present the 16 frames of the sequence.
Draw out a grid of 16 boxes. Starting with the top left box and descending left to right, draw out your scenario. Here we have chosen to represent a man watching a fly circling above his head. We will use an image digitized from a magazine for the man's head and shoulders, and the fly will be drawn by hand using GRAF 65000.

Click the ANIMATION icon at the top of the menu... the main group of functions is already selected.

Click the STORYBOARD icon... this draws out the grid of 16 frames (you will see it appear behind the menu).

Digitizing an image from the camera

Make sure that the video camera is connected to the SILVER and switched on (see quick reference section).

Click the CAMERA icon.

Click in the BLACK area to remove the menu display... you will see the 16 boxes. A rectangle is superimposed over one of the boxes...

... move the pen over the tablet and position the rectangle to select one of the storyboard boxes in which to digitize the first image (top left box)... click the pen.

The digitized image appears inside the box (frozen). Click the pen on the tablet to unfreeze the image... you can now adjust the position of the image beneath the camera, lighting, focus etc...

When you are happy with the image within the box, click once more... the image is frozen.
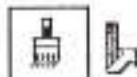
Press the button on the pen... the rectangle moves automatically to the next box in the storyboard (to the right) and the image in that box is digitized (frozen).

The image in the second box will be identical to that in the first box (unless the image beneath the camera has been moved). Since we are using the same digitized image for all of the frames of the animation the same procedure can be repeated until every box contains the digitized image.

Drawing over the digitized images

Since ANIMATION 1 does not contain any drawing functions we will use GRAF 65000 to draw the eyes of the man as he watches the fly circling around his head.

Click the GRAF 65000 icon at the top of the menu... the DRAWING type functions are already selected.

Click the FREEHAND function

Choose a fine brush... then exit from the menu to draw the details onto each frame of the storyboard.

Start at the top left box, working left to right top to bottom drawing first (say) the fly in each frame... then the eyes watching the fly.

Remember that the last frame (bottom right) will loop back to the first frame (top left) when the sequence is played... so the movement must follow a smooth cycle.

Use any other functions from GRAF 65000 to enhance the effect of the animation... the SMEARING BRUSH for example can be very effective when making subtle adjustments to digitized skin tones (to elongate the nose or make it twitch perhaps).

When you have finished retouching the storyboard boxes, move back to ANIMATION 1 by clicking the icon at the top of the menu.

It is possible to set an overall speed for the animation (in images per second), or to set individually the time for which each image is displayed. This latter is expressed in 'fields' (a field is equal to 1/50 second in europe or 1/60 second in USA and relates to the time taken to display a screen image on the display monitor).

The block of icons on the left represents the individual frames of the storyboard... the column of icons on the right represents possible overall speeds (note that there are slight differences between US and european versions).
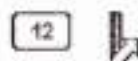
Click the lowest overall speed... notice that the block of icons to the left change accordingly.
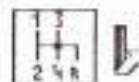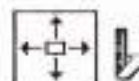
Click the EXIT icon... then click in the BLACK part of the menu to watch the animation run at the new speed.

Step by step

Call the menu (by clicking at the BASE of the tablet) and click the CONTINUOUS/STEP BY STEP icon... the racing car is replaced by a pair of footprints indicating that STEP BY STEP mode is now selected.
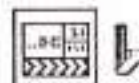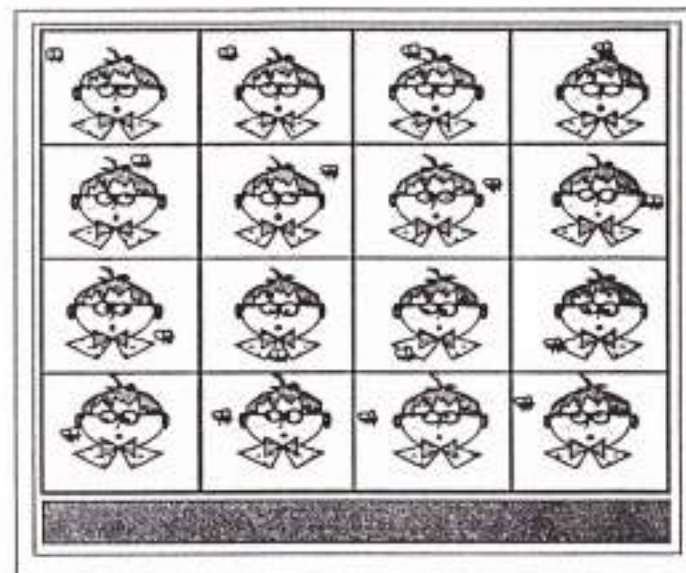
Executing the animation

The main ANIMATION icons are already displayed in the menu... click the EXECUTION icon... the options appear at the base of the screen.

Click the DISPLAY POSITION icon... the menu disappears... place the positioning rectangle in the middle of the screen (this is where the animation will be displayed).

Click the pen... the animation will start to run.

Press the tip of the pen on the tablet (keep it pressed) to pause the animation... release the tip to resume.

Changing the speed

Call the menu (by clicking at the BASE of the tablet) and click the SPEED option icon.

Click in the BLACK part of the screen to remove the menu... the FIRST image of the animation is displayed.

Click the pen in the centre of the tablet... the SECOND image of the animation appears.
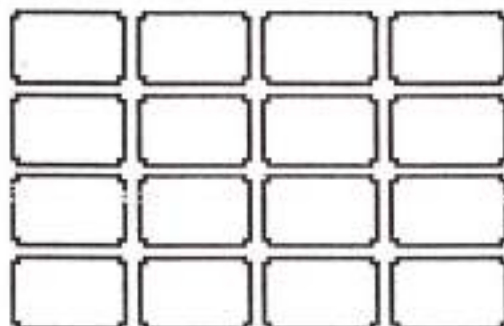
Click once more in the centre of the tablet... the THIRD image appears.... and so on...

Selecting the length for the animation sequence

Call the menu (by clicking at the BASE of the tablet) and click the LENGTH icon.

A block of icons representing each each image of the storyboard are displayed... all the icons are 'filled'... which indicates that all 16 images are to be used.

BEGIN
END

Click the BEGIN icon...

...then click (say) the second box from the left on the second row down... all the boxes before the one on which you clicked are now empty (they will not be used).
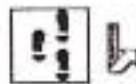
Click the END icon...

...then click (say) the second box from the right on the last row down... all the boxes after the one on which you clicked are now empty (they will not be used).

Click the EXIT icon.

Set CONTINUOUS mode by clicking the CONTINUOUS/ STEP BY STEP icon.

Click in the BLACK part of the menu... you will see that your animation cycle now runs between image number 6 and image number 14.

Some editing functions

There are various editing functions available... for multiple copying of images, deleting images, inserting images, clearing frames etc...

Copying from one box to another
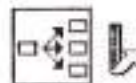
Call the menu and click the COPY icon... then exit from the menu.
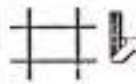
Position the rectangle over the image that you want to copy... then click the pen.
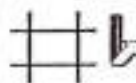
Move the rectangle once more... to the storyboard box you want to copy TO... and click the pen... the image is copied into the box where you clicked.

You can continue copying the same image, or choose a new box to copy from by pressing the button on the pen.

Clearing a frame

Call the menu and click the CLEAR FRAME icon.

Position the rectangle over the image that you want to copy... then click the pen... the frame is cleared using the current background color.

Deleting a frame

Call the menu and click the DELETE FRAME icon.
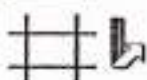
Position the rectangle over the frame that you want to delete... then click the pen... all the images following the frame are shifted by one frame toward the start (the image on which you clicked no longer exists and the last image of the storyboard appears twice).

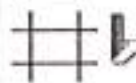## Inserting a frame

This function makes space between two frames so that an image may be inserted into the storyboard.

Call the menu and click the INSERT FRAME icon.
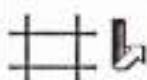
Position the rectangle over the frame BEFORE WHICH you want to insert the image... then click the pen... all the images following the frame are shifted by one frame toward the end (the last image is destroyed).
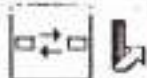
Swapping images

Call the menu and click the INSERT FRAME icon.
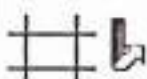
Position the rectangle over the first of the two frames you want to swap... click the pen.
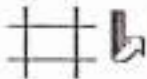
Position the rectangle over the frame you want to swap with... click the pen... the two images are exchanged.

Chapter 3 - quick reference section

Quick reference section

Camera	To digitize an image into the storyboard sequence using a video camera (see CONNECTION).	
Clear frame	Clears one box of the storyboard with the current background color.	
Clear screen	The DUSTBIN icon is used for clearing the screen in the color defined for the background. On clicking this icon, you are given the option to select a new background color before clearing the screen.	
Connection (color video camera)	(Unless your color camera has an RGB output), the composite signal from the camera must be decoded (converted to Red, Green and Blue, plus sync.).	

SILVER rear panel

FADEC decoder rear panel

Color video camera

Connect the VIDEO OUT (from the camera) to the VIDEO IN (of the decoder).

Connect the R, G and B OUTs (from the decoder) to the R, G and B INs (of the SILVER).

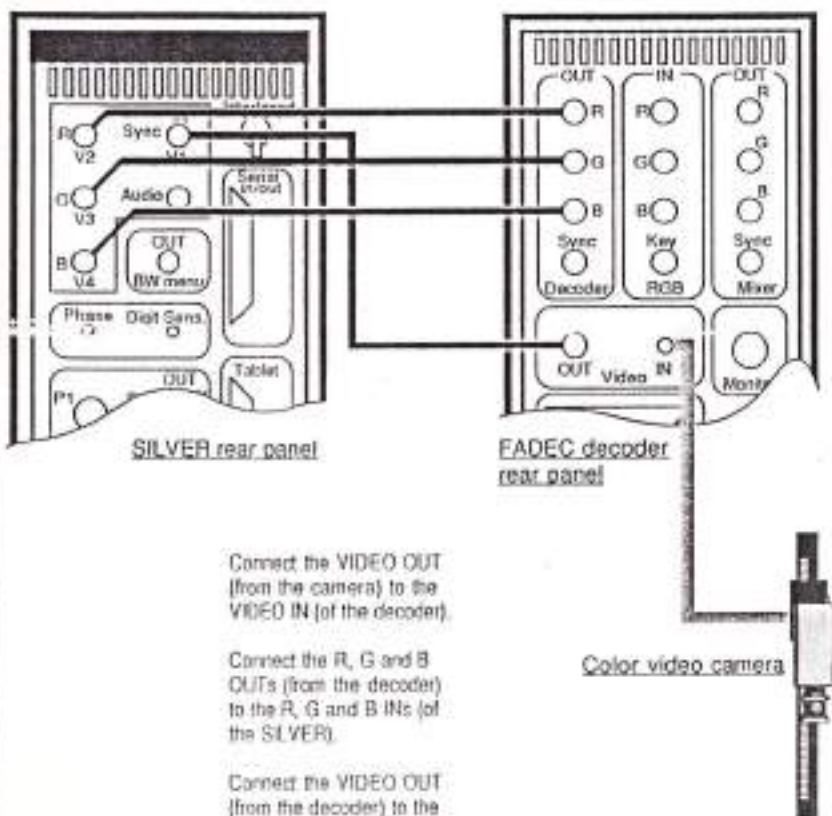Connect the VIDEO OUT (from the decoder) to the SYNC IN (of the SILVER).

Continuous	Continuous mode as opposed to STEP BY STEP allows you to view your animation sequence in a continuous movement and at the speed that you have set. One of the two icons is displayed to indicate the mode (see also STEP BY STEP).	
Copy frame	This function enables you to copy a frame from your storyboard into one or more of the other storyboard boxes.	
Cursor color	The default color of GRAF 65000's graphic cursor can be changed by clicking this icon.	
Delete frame	Deletes one of the frames of the storyboard and shifts the subsequent images toward the start. The last frame of the storyboard is duplicated.	
Disk functions Ⓜ	This function group contains functions for LOADING, SAVING, DELETING, CATALOGING and RENAMING of graphic images to disk. The MEMORY EXTENSION/DISK (DG-150 Ⓜ) is required in order to use these functions.	
Disk (catalog) Ⓜ	The CATALOG function will list any image files present on floppy disk in the MEMORY EXTENSION/DISK unit.	
Disk (delete file) Ⓜ	The DELETE function will delete an image file from floppy disk in the MEMORY EXTENSION/DISK unit.	
Disk (load image) Ⓜ	The LOAD function is used to LOAD a graphic image from a floppy disk in the memory extension.	
Disk (rename file) Ⓜ	By using the RENAME function you can give a new file name to any image file stored on floppy disk in the MEMORY EXTENSION/DISK unit.	
Disk (save image) Ⓜ	The SAVE function is used to SAVE the SILVER's current screen image to floppy disk.	
Display position	Allows you to choose the position (occupying 1/16th of the screen area) where your animation will be run.	
Execution	On selecting this function, you can : - view your animation sequence in real time positioned where you wish, on screen (1/16th). - test your animation in real time or step by step. - adjust the run speed of the animation. - set the beginning and the end for the cycle.	
Exit	Click this icon when you wish to exit from a function or option selection (with or without having made any choices).	

Insert frame	To create an available empty box within the story board between two existing frames. The subsequent frames are shifted towards the end. If before the insertion the story board already contains 16 images, the 16th will be lost. When the available box is created it contains the same image as that on which you clicked.	
Length (of animation)	This function allows you to define the start and end of your animation sequence within the 16 images of the storyboard.	
Main functions	This group contains all the principal functions for creating and editing an ANIMATION sequence.	
Miscellaneous functions	This family contains general functions not specifically related to any of the other function groups (CURSOR COLOR, UNDO ON/OFF etc...)	
Palette functions	This icon gives access to the functions concerned with management of the color palettes - choice of palettes, gradations, display status, etc.. This icon is used throughout the SILVER range of applications. (see GRAF 65000 manual).	
Restart	On selecting this function, all ANIMATION 1 variables are set to their default values and ANIMATION 1 reverts to its initial state.	
Speed	Allows you to set the running speed of your animation sequence (when in CONTINUOUS mode).	
Step by step	Step by step mode as opposed to CONTINUOUS allows you to view the animation frame by frame, by clicking the pen in centre of the tablet to change frame	
Stored images	Using an image previously stored on disk or in one of the memory planes of the extension, you may isolate a section (66 by 84 pixels) and place it in one of the storyboard's 16 boxes.	
Storyboard	To mark out a screen grid of 16 boxes for the 16 images of the animation.	
Undo	Ⓜ This function will cancel any modification made to the screen image since the previous function selected.	
Undo ON/OFF	Ⓜ In order for the UNDO function to operate, memory must be made available for temporary storage purposes. Click this icon to ENABLE or DISABLE the UNDO plane.	
Video ON/OFF	This function allows a live video image (input at V1) to be displayed inlayed within the defined background color. Note: this function not available for NTSC (US) and necessitates a monitor with SCART EUROCONNECTOR.	

BUSINESS 1
User manual

BUSINESS

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

Contents

Chapter 1 - introduction

Business 1 will create 3 dimensional pie and bar graphs automatically from data input using the keyboard.

Here are some of the features of BUSINESS 1 :

• All style and layout options selected from on-screen menus.

• Full compatibility with the SILVER range of applications... the graphics can be displayed in 65000 colors and on any type of background.

• Video and Disk functions of GRAF 65000 directly accessible from within BUSINESS 1.

• Textual commentary provided by LOGOTEXT* from pre-designed character fonts available in the form of ROM cartridges, or loaded from disk.

• Full implementation of LOGOTEXT* special effects such as shadow, relief, inverse video, color gradations, embossing etc.

* All of the TEXT functions of BUSINESS 1 require the presence of LOGOTEXT 1 in one of the slots of the SILVER or EXTENSION. Character fonts (either on cartridge or disk) will also be required.

If you wish to save your images to disk, the MEMORY EXTENSION/DISK (DG-150) must be connected to the SILVER.

About the manual

The manual is divided into two main sections - a 'guided tour', together with some useful advice, and a 'quick reference' section (covering most of BUSINESS's functions in alphabetical order).

It is recommended that you follow the guided tour which will show you the principal steps in creating first a PIE CHART display, then a BAR GRAPH.

Using t̶ ̶manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

   ie :

2. Icons exclusive to the manual (depicting a physical action)

   ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

Click the tip of the pen on the tablet (then release).

Press the button on the barrel of the pen.

Click the tip of the pen on the tablet WITHOUT releasing.

Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :

Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).

This indicates that you should type something on the SILVER's keyboard.

Chapter 2 - a guided tour

Rainfall

Annual average (inches)

31.2	14.17%	Belgium
37.2	16.90%	France
26.0	11.81%	Germany
29.1	13.22%	Holland
96.6	43.89%	England
220.1	100%	TOTAL

Pie charts

In this first example, we are going to create a pie chart display to illustrate rainfall figures for a group of countries.

Click the PIE CHARTS icon (violet).

Click the DATA icon.

Note that there are several possible modes for data input at this stage. PERCENTAGE mode is set initially, so each value input must (of course) be less than 100.

Here we wish to display absolute values. So click the PERCENTAGE ICON to change mode...

> Do you want to convert
> to percentages ?

Here we are being offered the possibility of displaying together with the absolute values, a conversion of those values to percentages.

YES 👆	We will answer yes.
24.35 85.17 53.76	The ABSOLUTE VALUE ICON is now displayed in place of the PERCENTAGE icon.
INPUT 👆	Click the INPUT icon.

Input the values :

Type your first value on the keyboard ("31.2").

Note that you can use values of up to three digits, of up to two decimal places.

Press RETURN (or click the pen).

Input commentary :

Type your first commentary on the keyboard ("Belgium").

Note that you can use a maximum of 8 characters for commentary to accompany each value.

Press RETURN (or click the pen). You are invited once more to...

Input the values :

Proceed similarly for each of the values and comments to be used for the pie chart.

When you have input all your figures, press RETURN (or click) WITHOUT INPUTTING A VALUE.
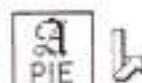
Setting the character font and style options

Click the STYLE icon (options concerning characters used to display the values and comments for the pie).

Select a character font from cartridge...

...OR load one from disk. Small sized of characters are preferable (14 points for example).

Choose a text display mode...

...RELIEF mode for example.

Select a color for the character RELIEF.

Select the LIGHTING ANGLE for the RELIEF.

Set the RELIEF DEPTH.

Selecting a page layout

Click the SMALL PIE LAYOUTS icon.

In this example, we wish to place the pie at the bottom left of the screen, with the values and comments to the right of it.

From the choice of 10, select the layout for the first pie... bottom left, with values and comments to the right.

Selecting a gradated background.

To set the top and bottom colors for a gradated background, click this icon.

Select top color

Click to remove the menu... you can choose the color for the top of the gradation from either the palette or the screen image.

Select bottom color

Similarly, choose a color for the bottom of the gradation.

Note that in cases where you do NOT wish to display the gradated background (thus obliterating whatever lies on the screen beneath), you should click the CANCEL icon.

Drawing the pie chart.

Click the GO icon. The pie chart, values and comments are drawn over a gradated background.

31.2	14.17%	Belgium
37.2	16.90%	France
26.0	11.81%	Germany
29.1	13.22%	Holland
96.6	43.89%	England
220.1	100%	TOTAL

To return to the menu (in order to continue or make further modifications, click at the base of the tablet.

New colors for the pie sections

The colors for the pie sections are pre-programmed. You can however choose your own colors by clicking this icon.

> Select the first color of the 1st section

Click to remove the menu... you can choose the first color for the section (the top of the gradation), from either the palette or the screen image.

> Select the second color of the 1st section

Click to remove the menu... you can choose the second color for the section (the bottom of the gradation), from either the palette or the screen image.

First color
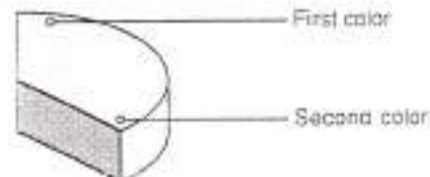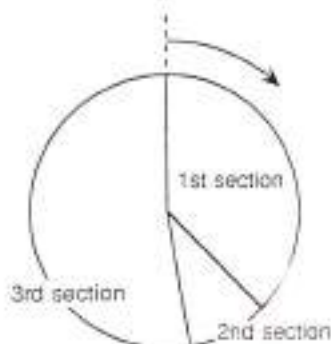
Second color

For each section, the 'FIRST COLOR' refers to the top color of the gradation and 'SECOND' to the bottom color.

The section designated '1st SECTION' starts at the top of the pie, and subsequent sections follow in a clockwise sense.

1st section

3rd section

2nd section

Note that if you wish to draw a pie section in UNIFORM color... when asked for the second color for the section, click this (green) icon at the base of the screen.

Having selected the color(s) for the first section of a pie...

> Select the first color
> of the 2nd section

> Select the second color
> of the 2nd section

You can continue to modify the colors for each of the sections (up to the maximum of 17 sections).

← 👆

→ 👆

You may have noticed the two arrows at the base of the menu. These access the different sections for the pie (without having to define a whole series of new colors on the way !)
Click the relevant icon to move on to another section.

⏏ 👆

When you have finished defining new colors for the sections of the pie... click the EXIT icon.

Displaying a title

Since we wish to display a title at the top of the screen...

TITLE 👆

...click the TITLE icon.

TEXT 👆

Click the INPUT icon.

> Input title (max 49 chars)

Type your title on the keyboard...

...and press RETURN (or click the pen).

TITLE

Choose a font for the title (the maximum height allowed for title characters is 42 points).

The default color for the title is white. You can choose a new color (or colors) as well as selecting from the range of style options offered (italics, gradated characters, shadows, relief effect etc...).

Displaying a subtitle

SUB TITLE

When you have finished defining the title, click the SUBTITLE icon. The procedure for inputting characters and style selection is the same as for the title.

In the subtitle's case however, the maximum permitted height is 28 points.

Drawing the pie chart.

GO

Click the GO icon. The TITLE, SUBTITLE, PIE CHART, VALUES and COMMENTS are drawn over the GRADATED BACKGROUND.

To return to the menu, click at the base of the tablet.

Rainfall
European average (inches)
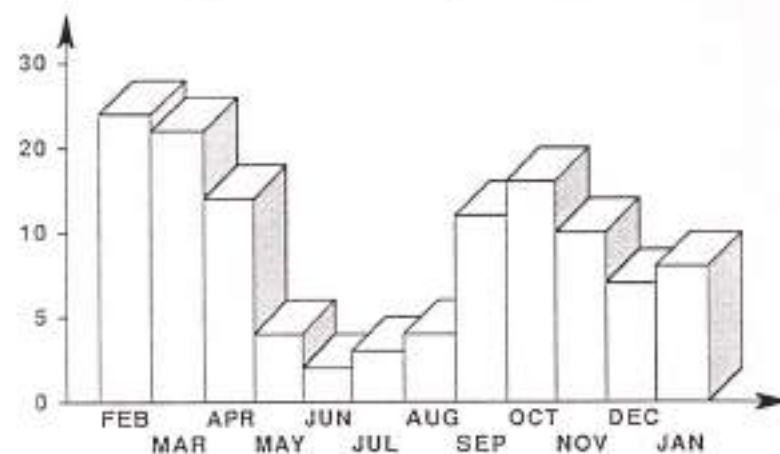
Bar graphs

In this example, we are going to create a bar graph to display the average european monthly rainfall figures.

Click the BAR GRAPHS icon (violet).

Labeling for each of the bars can be done automaticaly according to days, months or years, as well as an option to include your own labels (up to 4 characters) or no labels at all.

Click the TEXT icon.

Click the icon representing MONTHS. Note that the start month (for the first bar) is already displayed in the menu.

We want our graph to run from february to january... ...so click the FEBRUARY icon.

Inputting the figures

DATA ↳ Click the DATA icon.

Here we have the option of displaying figures to a scale of 100 (in which case values of over 100 will not be accepted), or on a scale that will be automatically adjusted according to the maximum value that is input.

% ↳ Since our maximum value will be around 25, we will change to ABSOLUTE VALUES mode.

24.35
85.17
53.76

The ABSOLUTE VALUES icon is now displayed in the place of the PERCENTAGE icon.

INPUT ↳ Click the INPUT icon.

Input the values :

Type your FIRST value on the keyboard (for february)... ...note that you can use values of up to four digits.

Press RETURN (or click the pen).

Note that IF we had selected to input FREE comments for the bars RATHER than MONTHS, we would be requested at this point to input those comments.

Input the values :

Input the SECOND value, the THIRD and so on... until the figures for all of the months have been input.

When you have input all your figures, press RETURN (or click) WITHOUT TYPING ANY VALUE.

Characters for the bar comments

Click the STYLE icon.

Choose a character font for the bar comments (from cartridge or from disk). A small character size (no larger than 14 points) is recomended.

Set the style of characters for the bar comments (italic, shadow etc...).

Writing direction for the comments

Click the COMMENTARY DIRECTION icon.

Choose one of the three directions proposed.

Characters for the axis graduation

Click the BAR GRAPH MISCELLANY icon to gain access to the character font/style options for the vertical axis graduations.

Click the STYLE icon.

Choose a character font for the vertical axis graduations (from cartridge or from disk). A small character size (no larger than 14 points) is recomended.

Set the style of characters for the axis graduations (italic, shadow etc...).

A title for the bar graph
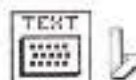
TITLE

Click the TITLE icon.

TEXT

Click the INPUT icon.

Input title (max 49 chars)

Type your title on the keyboard...

...and press RETURN (or click the pen).

A TITLE

Choose a font for the title (the maximum height allowed for title characters is 42 points).

The default color for the title is white. You can choose a new color (or colors) as well as selecting from the range of style options offered (italics, gradated characters, shadows, relief effect etc...).

Subtitle

SUB TITLE

When you have finished defining the title, click the SUBTITLE icon. The procedure for inputting characters and style selection is the same as for the title.

For the subtitle, it is recommended that you choose characters of around 14 points in height.

Gradated background

Set the top and bottom colors for a gradated background (as described for PIE CHARTS).

Spacing of the bars

There are two possible modes for the spacing between adjacent bars. To select the spacing, click the BAR MISCELLANY icon.

We do not require spaces between the bars, so click this (green) icon at the base of the menu...

...an icon depicting NO SPACES between adjacent bars is now displayed in its place.

Drawing the bar graph

Click the GO icon. The title, subtitle, graph and comments are drawn (in that order) over the gradated background.

Chapter 3 - quick reference section

Quick reference section

Addition line color	The color used for the ADDITION LINE for pie chart displays, can be modified by clicking this icon (which can be found inside the PIE MISCELLANY function).	
Antialiasing	This is a technique whereby curves and diagonals of a form are 'smoothed' to remove the stepping effect resulting from the limited definition in a digitally generated image. Intermediate colors are calculated and generated (in the zone between the form and background).	
Axis color (bar graphs)	The color used for the horizontal and vertical axes of a bar graph display, can be modified by clicking this icon (which can be found inside the BAR MISCELLANY function).	
Background (of character)	The character's background is usually transparent. By selecting this option, that background will be displayed as a solid rectangle in the color defined as character RELIEF/BACKGROUND color.	
Bar colors	The colors for each of the bars is already programmed for default. These colors can be modified by clicking the BAR COLORS icon. The two colors are selected in an identical manner to the PIE COLORS function. Note that each bar is attributed two colors, and these colors are then assigned to two of the three visible faces of the bar (according to the LIGHTING ANGLE set). The third face is given a 'mixture' of the two colors. You also have the option of using the same color for all three faces (by clicking the UNIFORM BAR COLOR icon).	
Bar comments (days)	After inputting the start day, each of the bars will be automatically labelled with the days of the week. The currently selected start day is displayed at the base of the menu.	
Bar comments (free)	Validating this icon will allow you to input your own commentary for each of the bars of the graph. Subsequently, when you input the data for each bar, you will also be requested to input commentary for that bar.	
Bar comments (months)	After inputting the start month, each of the bars will be automatically labelled with the months of the year. The currently selected start month is displayed at the base of the menu.	
Bar comments (none)	By validating this icon, the bar graph will be displayed without commentary to accompany each of the bars.	
Bar comments (years)	After inputting a start year, each of the bars will be automatically labelled in sequence.	

Term	Description	Icon
Bar graphs	Click this icon to access all the functions concerned with creating bar graph displays.	
Cancel (background)	If you click this icon (which can be found inside the GRADATED BACKGROUND function), on subsequent use of the GO function, the screen will NOT be cleared.	
Cartridge font	This icon accesses any fonts present on cartridges installed in the SILVER or EXTENSION for use by BUSINESS 1.	
Clear screen	The DUSTBIN icon is used for clearing the screen in the color defined for the background. On clicking this icon, you are given the option to select a new background color before clearing the screen.	
Color (main) of character	The main color attributed to a character is defined using this icon. When gradated characters are selected, it is this color that will appear at the top of the gradation.	
Color (second) of character	The secondary color attributed to a character is defined using this icon. When gradated characters are selected, it is this color that will appear at the bottom of the gradation.	
Color (relief) of character	The color used for the edge of a character in RELIEF, for the OUTLINE (when selected) or for the character BACKGROUND (when non transparent) is defined using this icon.	
Data	This icon is used for accessing data mode/input functions, as well as selection of characters, style options etc, directly concerned with that data and its associated comments.	
Disk functions	The disk functions group (for LOADing, SAVEing, etc of graphic images) is identical to that of GRAF 65000. For information concerning any of these functions you should refer to the GRAF 65000 manual.	
Embossed	The effect produced by this option is as if the characters had been 'stamped' over the background image. The character's defined colors have no effect when using this option.	
Exit	Click this icon when you wish to exit from a function or option selection (with or without having made any choices).	
Go	When you click this icon, the PIE CHART or BAR GRAPH is drawn on the screen, according to all the variables that you have set for the display (data, characters, colors, etc.)	
Gradated background	This icon allows the top and bottom colors to be set for the full screen gradated background. On executing the graphic (by clicking GO) the screen will first be cleared with a smooth gradation (vertically) between those two colors. This same function should be used to access the CANCEL icon (which prevents the screen from being cleared).	

Gradated characters	Characters can be displayed with a gradation (vertically) between two colors. These colors are described as MAIN and SECOND character color. The gradation starts at the top of the character (main color) and ends at the BASE LINE (second character). For characters ranging beneath the base line (g, y, p etc.), the descender will be displayed in the second color only)	$A^{\equiv}$
Input data	Click this icon when you want to input a new set of data for the pie chart or the bar graph. If there are any commentaries to be written for the sections of the pie or the bars of the graph, they too will be input at this stage.	INPUT
Input text	From within the TITLE or SUBTITLE function, click this icon when you wish to input new text.	TEXT
Italics	Characters can be displayed in italic by selecting this option.	$\mathscr{A}$
Label direction	The commentary labels for bar graphs can be displayed in one of three ways. Clicking this icon gives access to the choice of direction.	

Layouts (large pie)

A choice of 4 automatic page layouts incorporating a large pie chart is offered on clicking this icon. These are as follows...

Pie chart to the left of the screen, with values and comments to the right.

Pie chart to the right of the screen, with values and comments to the left.

Values and comments centered at the bottom of the screen, with the pie chart above them.

Pie chart centered at the bottom of the screen, with values and comments above it.

Layouts (small pie)

A choice of 10 automatic page layouts incorporating a small pie chart is offered on clicking this icon. These are as follows...

Values and comments above/below pie chart along central vertical axis.

Values and comments at the bottom left/right of the screen, with the pie chart above them.

Pie chart at the bottom left/right of the screen, with values and comments above it.

Pie chart at the upper left/right of the screen, with values and comments horizontally opposite.

Pie chart at the lower left/right of the screen, with values and comments horizontally opposite.

Lighting ang (characters)	The direction of a character's SHADOW or its RELIEF edge, will be determined by this option. 8 different angles are available.	
Lighting angle (bars)	Two colors are attributed to each bar of the graph. A third (intermediate) color is generated by the program. These three colors are sorted automatically in order of relative luminosity, and each color is placed on one of the three visible faces according to the LIGHTING ANGLE that has been set. A selection of six imaginary lighting angles is proposed....	
Load	The LOAD icon (situated within each of the CHARACTER STYLE functions) is used to LOAD a LOGOTEXT character font from disk for use with BUSINESS 1. Characters defined in color are not acceptable.	
Miscellaneous	This (violet) icon represents a group of functions identical to the MISCELLANEOUS group from GRAF 65000. For further information, you should refer to the GRAF 65000 manual.	
Miscellany (bar graphs)	Click this icon to gain access to COLOR PALETTE functions, bar SPACING, AXIS and bar OUTLINE COLORS as well as CHARACTER options for the bar graph vertical AXIS GRADUATIONS.	
Miscellany (pie charts)	Click this icon to gain access to COLOR PALETTE functions, pie OUTLINE COLOR and the COLOR of the ADDITION LINE for the values.	
Negative	The 16 levels of grey that are used for each character are inversed. The character will be displayed in negative. Parts that are normally transparent become opaque, and vice versa.	
Normal	This icon indicates that the following effects are NOT enabled : shadow, relief, embossed, opaque background.	
Outline color (bars)	This icon allows you to select a new color for the outlines of the bars. You can select that color from the palette or from within your image itself.	
Outline color (pies)	This icon allows you to select a new color for the antialiased outlines used to draw the pie. You can select that color from the palette or from within the screen image.	
Palette functions	This icon gives access to the functions concerned with management of the color palettes - choice of palette, gradations, display status, etc. This icon is used throughout the SILVER range of applications. See GRAF 65000 manual.	
Relief (characters)	A relief effect can be given to characters displayed. The depth of the relief and the lighting angle of the characters are definable.	

Relief depth	This icon gives access to a choice of 4 possible depths for the relief effect of a character (when selected). This option applies also to the SHADOW effect and defines the distance of throw.	A
Restart	On selecting this function, all PIE CHART or BAR GRAPH (depending on the current mode) variables are set to their initial or default values.	
Shadow	Characters may be displayed with a shadow effect by selecting this icon. The shadow is thrown onto the screen image by darkening the colors of the points concerned. The shadow's throw (see RELIEF DEPTH) and the lighting angle are definable.	A
Spacing (bars)	You have the option of displaying the bar graph either with spaces between the bars or with the bars joined together. Click this icon (which can be found in MISCELLANY-BARS) to switch between the two.	
Style (bar comments)	Use this icon to select the character font and style for the comments along the horizontal axis of the BAR GRAPH. This icon can be found within the (BARS) DATA function.	BARS
Style (graduations)	Use this icon to select the character font and style for the graduations along the vertical axis of the BAR GRAPH. This icon can be found within the MISCELLANY (BARS) function.	
Style (pie comments)	Use this icon to select the character font and style for the values and comments of the pie chart. You can find this icon within the (PIES) DATA function.	PIE
Style (subtitle)	This icon gives access to character selection and style options for the SUBTITLE and can be found within the SUBTITLE function (for both PIES and BAR GRAPHS).	
Style (title)	This icon gives access to character selection and style options for the TITLE and can be found within the TITLE function (for both PIES and BAR GRAPHS).	TITLE
Subtitle	The subtitle for the BUSINESS 1 graphic may be a maximum of 49 characters (including spaces). It will be positioned at the upper centre of the screen immediately beneath the title. The maximum height for characters used in the subtitle is 28 points. The default color is white, but this can be changed as well as the character font and style.	SUB TITLE
Text ON/OFF	Click this icon to cancel the display of values and comments for PIE CHARTS. It can be found inside the DATA function. You will not then be requested for comments on subsequent INPUT.	
Text type	This icon gives access to a choice of textual commentary for BAR GRAPHS : DAYS of the week, MONTHS of the year, YEARS, FREE COMMENTS (to input yourself), or NONE.	TEXT

Title	The title for the BUSINESS 1 graphic may be a maximum of 40 characters (including spaces). It will be positioned at the upper centre of the screen immediately beneath the title. The maximum height for characters accepted for the title is 42 points. The default color is white, but this can be changed as well as the character font and style.	**TITLE**
Undo	In either of the text display modes, this function will cancel any modification made to the screen image since the previous function selected.	**UNDO**
Values (absolute)	When you input values for a PIE CHART or BAR GRAPH, you have the option of inputting either ABSOLUTE VALUES or PERCENTAGES (the current mode being represented by a double faced icon - see below).

Having selected the former (by validating the ABSOLUTE icon), the program will then if requested (in the case of PIE CHARTS only) convert these values to percentages of the total.

In ABSOLUTE mode you may subsequently INPUT values of up to 3 figures incorporating 2 decimal place (for PIES), and 4 figures with no decimal places (for BAR GRAPHS). | 24.35 85.17 53.74 |
| Values (percentage) | When you input values for a PIE CHART or BAR GRAPH, you have the option of inputting either ABSOLUTE VALUES or PERCENTAGES (the current mode being represented by a double faced icon - see above also).

Having selected the latter (by validating the PERCENTAGES icon), each values input must be less than 100. The values are interpreted as follows :

PIES - the sum of all the values input must not exceed 100 otherwise the program reverts to ABSOLUTE mode. The resulting PIE will contain the sections representing the values input, together with a section called "OTHERS" which represents the remainder of all the values.

BAR GRAPHS - the vertical axis graduations will run from 0 to 100. All values input will appear to that scale (as opposed to ABSOLUTE mode - where the scale and the graduations are adjusted to the highest value input). | **%** |
| Video functions | The VIDEO group of functions is identical to that found in GRAF 65000. For further information refer to the GRAF 65000 manual. | **VIDEO** |
| Video ON/OFF | This function allows a live video image (input at V1) to be displayed inlayed within the defined background color. Note: this function not available on NTSC (US) and necessitates a monitor with SCART EUROCONNECTOR. | VIDEO ON/OFF |

GENCAR
User manual

GENCAR

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

GENCAR (DG-GC)

GENCAR is an easy to use character generator idealy suited to applications with basic text requirements. GENCAR offers 4 character fonts together with a comprehensive suite of style options.

Text input and on-screen positioning

Style options

Character color		5 different writing directions	
Background/relief color		4 character fonts	
Upright characters		4 character sizes	
Italic characters		Transparent background	
Shadows		Solid character background	
Characters in relief		5 degrees of translucence	
Shadow/relief depth		Palette options	
Shadow/relief direction		Clear screen	

Demonstration disk

Certain application cartridges are accompanied by a demonstration disk. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

PROJECT — Click the PROJECT icon at the top of the menu.

LOAD — Click the LOAD icon.

overwrite — (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO — When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY — Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 - introduction

About GENCAR

GENCAR is an easy to use character generator idealy suited to applications with basic text requirements. GENCAR offers 4 character fonts together with a comprehensive suite of style options.

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

ie :

2. Icons exclusive to the manual (depicting a physical action)

ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below...

Click the tip of the pen on the tablet (then release).

Press the button on the barrel of the pen.

Click the pen at the BASE of the tablet (the part of the tablet where you should click will be shown as a shaded area)...

Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).

This indicates that you should type something on the SILVER's keyboard.
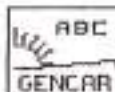
Click the GENCAR icon at the top of the menu... the three functions appear... CLEAR SCREEN, STYLE OPTIONS and TEXT INPUT.

Inputting text using the keyboard

Click the TEXT INPUT icon... a flashing cursor appears at the base of the menu...

Input text to position

Type the text to be displayed using the keyboard... you can use up to 32 characters (depending on size, style selections etc.)...

... then press RETURN (or click the pen on the tablet).

The menu disappears and a rectangular frame (representing the size of the text to be printed) is superimposed over the graphic image.

Move the pen over the tablet to position the text... then click to print the text on the screen.

You can print the same text in different positions by moving the pen and clicking repeatedly.

Click at the base of the tablet to return to the menu... ... the text previously input is displayed at the base of the screen.

Inputting some more text...

Press the DEL key on the keyboard... the previous text disappears...

Type some more text... note : you can now use the DEL key to delete characters one at a time (the last character typed is deleted with each press).

Press RETURN (or click the pen on the tablet)... the menu disappears...

Lining up the with the previous text...

Press the button on the pen... the positioning rectangle is now 'frozen' in position (provided there is enough space) just to the right of the previous text printed (you can 'unfreeze' the rectangle by pressing the button a second time).

Click the pen... the text is printed.

Click at the BASE of the tablet to call the menu... the previously input text is still displayed...

Click at the BASE of the tablet a second time to exit from TEXT INPUT mode.

Some style options

Click the STYLE icon... a selection of style option icons is displayed at the base of the menu.

After making each new style selection try out the modification by typing some text to the screen.

Choosing a new color for the characters...

Click the CHARACTER COLOR icon... the menu disappears...

You can select a new color with which to display the characters by clicking on the palette, or over a point of your image that already contains the color you want.

Characters on a solid background...

Normally characters are displayed on a transparent background... click the DISPLAY MODE icon ONCE...

... the icon now indicates that OPAQUE background mode is selected. Any characters typed to the screen will be displayed on a solid background rectangle.

Characters in relief

Click the DISPLAY MODE icon once more...

... the icon now indicates that RELIEF mode is selected. Any characters now printed will be displayed in relief.

Choosing a color for the character relief...

Click the RELIEF/OPAQUE COLOR icon... this option permits a new color to be selected for use as character background (in OPAQUE mode) or relief (in RELIEF mode).

You can select a new color for the character relief (or background) by clicking on the palette, or over a point of your image that already contains the color you want.

Shadows...

Click the DISPLAY MODE icon once more...

... the icon now indicates that SHADOW mode is selected. Any characters typed to the screen will throw a shadow onto the underlying image.

Changing the lighting angle...

Click the LIGTING ANGLE icon...

A selection of 8 different lighting angles is displayed...
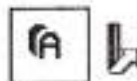
The 'lighting angle' for shadows can be modified by clicking one of the lighting options proposed... note that the lighting angle also determines the RELIEF direction when in RELIEF mode.

Changing the depth of relief or shadow...

This option determines either the length of throw (for SHADOWS) or the thickness of relief (for RELIEF mode).

Click the RELIEF DEPTH icon...

A selection of five DEPTH icons is displayed... click one of the icons at the base of the menu.

Size of characters...

Click the CHARACTER SIZE icon...

A selection of four SIZE icons is displayed... click one of the icons to select a new character size.
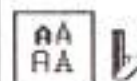
Selecting a different character font...

Click the CHARACTER FONT icon...

A selection of four FONTS are available... click one of the icons to select a different character font.

Writing direction...

Click the WRITING DIRECTION icon...
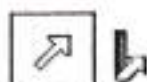
A selection of five WRITING DIRECTIONS is offered...
click to select a new inclination for text to be displayed.

Italics

Click the UPRIGHT/ITALIC mode icon...

... an italic capital 'A' is now displayed by the icon
indicating that ITALIC mode is selected.

Translucent characters

Click the TRANSLUCENCE icon...
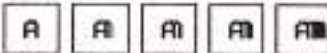
By default characters are completely opaque. The
degree of translucence of the character (and its
RELIEF) can be redefined by clicking one of the five
icons proposed (0%, 12%, 25%, 50% or 75%).

Quick reference section

Background (of character)
The character's background is usually transparent. By selecting this option, that background will be displayed as a solid rectangle in the color defined as character RELIEF/BACKGROUND color.

Clear screen
The DUSTBIN icon is used for clearing the screen in the color defined for the background. You are given the option to select a new background color before clearing the screen.

Color (of character)
The main color attributed to a character is defined using this icon.

Color (of relief)
The color used for the edge of a character in RELIEF, or for the character BACKGROUND (when non transparent) is defined using this icon.

Direction (of writing)
This icon gives access to a choice of 5 different writing inclinations....

Exit
Click this icon to exit from the function (with or without having made any selections or modifications).

Font
A choice of 4 character fonts is offered.

... these are : STANDARD, GENEVA, MONACO and NEW YORK.

Input text
This function is used for input of text and subsequent positioning of that text on the screen.

Italics
Characters can be displayed either in italics or upright by clicking this icon. The current mode is indicated by the icon itself.

Lighting angle
The direction of a character's SHADOW or its RELIEF edge can be modified by this option. 8 different angles are available.

Normal
This icon indicates that the following effects are NOT enabled : shadow, relief, opaque background.

Palette functions
This icon gives access to the functions concerned with management of the color palettes - choice of palette, gradations, display status, etc. (see GRAF 65000 manual).

Relief
A relief effect can be attributed to characters. The depth of the relief and the lighting angle are definable (see RELIEF DEPTH and LIGHTING ANGLE).

Relief depth
This icon gives access to a choice of 5 possible depths for the relief effect of a character (when selected). This option applies also to the SHADOW effect and defines the distance of throw.

Shadow
A shadow effect can be attributed to characters. The shadow is thrown onto the screen image by darkening the colors of the underlying image. The shadow's throw and the lighting angle are definable (see RELIEF DEPTH and LIGHTING ANGLE).

Size (of characters)
On clicking this icon a choice of 4 different character sizes is offered (the smallest character size is selected by default).

Style options
This icon gives access to the selection of style options (colors, shadow, relief, etc...).

Translucence
Characters can be displayed completely opaque or with translucence selectable from a choice of 5 degrees (the option icons represent translucences of 0%, 12%, 25%, 50% or 75%).

GRAF 1
User manual

GRAF 65000

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

GRAF 1 (DG-GR1)

GRAF 1 offers video and graphic functions to extend the capabilities of GRAF 65000 (and other SILVER applications).

The new functions will appear within the existing application's menus. Either the MEMORY EXTENSION 1/DISK (DG-150) or MEMORY EXTENSION 2 (DG-155) are required in order to use the MEMORY PLANE COPY & PASTE function (marked ❹).

Drawing functions

▶■ Translucent airbrush   ◁ View (remove menu)

Geometric functions

◩ Translucent lines

Color functions

▨ Colorizing brush   ▨ Blending brush

Memory functions

🐘 Copy an object from an image in memory to the current screen

Video functions

DIGIT B/W Black & white multi-level digitizing with real time colorizing

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Demonstration disk

Certain application cartridges are accompanied by a demonstration disk. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

PROJECT   Click the PROJECT icon at the top of the menu.

LOAD   Click the LOAD icon.

overwrite (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO   When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY   Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

About GRAF 1

GRAF 1 offers video and graphic functions to extend the capabilities of GRAF 65000 (and other applications). The new functions will appear within the existing application's menus.

- The TRANSLUCENT AIRBRUSH differs from the standard AIRBRUSH of GRAF 65000 in that a flat transparent coat of color is applied to the image as opposed to a random spray. The thickness of coat is not time dependant.
- The TRANSLUCENT LINES function offers the facility to draw straight lines using the TRANSLUCENT AIRBRUSH effect.
- The COLORIZING BRUSH allows you to paint over an image with a different color without altering the contrast of the image.
- The BLENDING BRUSH blends the image lying beneath the cursor as it passes. The effect obtained is a freehand antialiasing, and is extremely useful for blending in an object 'cut & pasted' from another part of the image to remove hard edges.
- BLACK & WHITE MULTI-LEVEL DIGITIZING... for digitizing images originating from a camera or video cassette recorder in 32, 16, 8, 4 or 2 grey levels. Colors may then be assigned to each of the grey levels to obtain spectacular posterizing effects.
- The MEMORY PLANE COPY & PASTE function permits an object to be copied from a memory plane image to the current screen image.
- Click the VIEW icon (which appears in all function groups of GRAF 65000) to cause the menu to disappear temporarily so that you can see what's on screen.

Where to find the new functions

Within GRAF 65000 the seven new functions can be found in the following function groups...

FREEHAND functions

LAYOUT functions

VIDEO functions

COLOR functions

All function groups

MEMORY functions (requires MEMORY EXTENSION 1 or 2)

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

ie :

2. Icons exclusive to the manual (depicting a physical action)

ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

Click the tip of the pen on the tablet (then release).

Press the button on the barrel of the pen.

Click the tip of the pen on the tablet WITHOUT releasing.

Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :

Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).

This indicates that you should type something on the SILVER's keyboard.

Chapter 2 - a guided tour

GRAF 65000 — Click the GRAF 65000 icon at the top of the menu (this is where all of the GRAF 1 functions can be found)... the DRAWING type functions are already selected.

BLACK & WHITE MULTI-LEVEL DIGITIZING

VIDEO — Click the VIDEO FUNCTIONS con

DIGIT B W — Click the BLACK & WHITE DIGITIZING icon... a sub-menu appears...

Click in the centre of the screen (not on either of the two icons displayed in the lower half of the screen)...

A black and white digitized image (digitized to 32 levels) is appears (frozen)... a cross shaped cursor is also displayed.

Click the pen in the centre of the tablet... the image is no longer frozen...

Click at the BASE of the tablet . a sub-menu appears...

Setting the number of digitizing levels

32 LEVELS — Click the DIGITIZING LEVELS con...

16 LEVELS — Click the icon a second time...

8 LEVELS — The icon now displays eight LEVELS...

Digitizing an image

Click in the centre of the screen... the image is now displayed digitized to eight levels.

Click at the BASE of the tablet... the sub-menu reappears.

Colorizing the image

RGB — Click the RGB MIXER icon... the image is frozen and a message appears...

Click the level

Click in the centre of the screen... the sub-menu disappears...

... click a point within the image (to indicate the grey level that you want to colorize)... the RGB MIXER appears...

OK —
0   100%
| ı ı ı ı | ı ı ı ı | ı ı ı ı | ı ı ı ı |
R
G
B

R G B — Click the pen over the RIGHT edge of one of the bars (R, G or B) and (KEEPING the tip depressed) slide the pen to the left... then the right...

... the color assigned to the digitizing level on which you clicked within your image changes accordingly.

OK — Click the OK icon... the sub-menu reappears.

RGB — Click the RGB MIXER icon... and redefine the rest of the digitizing levels (as described above).

Note that if during the process of RGB mixing you wish to cancel the color you have just mixed, click the EXIT icon (instead of the OK icon).

When you have finished redefining the digitizing levels and the sub-menu is displayed... click in the centre of the screen... the cursor is displayed...

Click the pen in the centre of the screen... the colorized image is no longer frozen.

Click at the base of the tablet to call the sub-menu.

Memorizing the colorized image

Click the END icon... the colorized image is memorized (as a graphic image)... the menu reappears.

MEMORY PLANE COPY & PASTE
Saving the first image

Click the MEMORY functions icon.

Click the SAVE TO MEMORY icon (to save the digitized image you have just colorized into one of the memory planes).

Drawing a second image

Click the DRAWING functions icon.

Click the CLEAR SCREEN icon.

Click YES... the screen clears with the current background color.

Click the FREEHAND function... then exit from the menu and draw an object on the screen.

Saving the second image

Call the menu and click the MEMORY functions icon.

Click the SAVE TO MEMORY icon (to save the drawn image you have just created into one of the memory planes).

Restoring the first image

Click the LOAD FROM MEMORY icon... a compressed representation of the memory images is displayed...

Position the cursor over the DIGITIZED (first) image that you saved to memory and click the pen on the tablet... that image is restored to the screen.
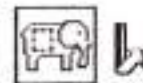
Defining the source for the copy

Click the MEMORY PLANE COPY & PASTE icon... two option icons appear at the base of the menu...

Click the COPY OBJECT icon... the menu disappears and a compressed representation of the memory images is displayed...

Position the cursor over the DRAWN image that you saved to memory and click the pen on the tablet... that image is loaded, and a square shaped cursor appears...

Click over one of the corners for the rectangle that will define the object to copy...
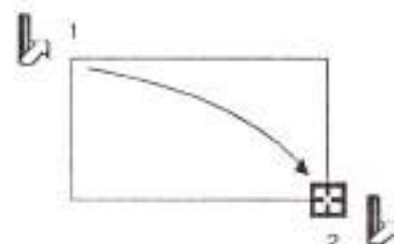
Move the cursor to the opposite corner for the rectangle and click to fix that corner... the rectangle is defined.

Repositioning the source rectangle...

Click INSIDE THE RECTANGLE... move the pen... the rectangle moves also. You can reposition the rectangle anywhere on screen.

Click once more, the rectangle becomes fixed.

Note that pressing the button on the pen will allow you to recommence the procedure for defining the object.

The reference marker

If you are happy with the size and position of the rectangle, click OUTSIDE THE RECTANGLE... a message appears...

Position your marker

This message refers to a marker placed relative to the copy rectangle, enabling you to position the object precisely within the destination image... click the pen...

Position the cursor on a point of reference within the rectangle and click the pen...

... the destination (digitized) image returns to the screen... the rectangle is superimposed over the image and a small cross marks the reference point.

Positioning the destination rectangle...

Click INSIDE THE RECTANGLE... move the pen... the rectangle moves also.

Position the rectangle (and reference marker) within the destination image... then click the pen to fix its position.

Executing the copy

When you are happy with the position of the destination rectangle, click OUTSIDE THE RECTANGLE...

The object is copied to the image and the menu returns.

Note that the color defined as current BACKGROUND COLOR (this can be redefined from within the CLEAR SCREEN function) is considered as TRANSPARENT. This means that within the object to be copied, that color will be transparent when the copy is made.

If the object is not transported on a transparent background (as will be the case for a digitized object) you can use the ERASER function (DRAWING function group) to clean up the background (providing UNDO is ON).

Click the LOAD FROM MEMORY icon... a compressed representation of the memory images is displayed...

Position the cursor over the DIGITIZED image that you saved to memory and click the pen on the tablet... that image is loaded to the screen.

Copying the whole screen

Click the MEMORY PLANE COPY & PASTE icon... the two option icons appear at the base of the menu...

Click the COPY SCREEN icon... the menu disappears and a compressed representation of the memory images is displayed...

Position the cursor over the DRAWN image that you saved to memory and click the pen on the tablet...

... the DRAWN image (from the memory plane) is superimposed over current (DIGITIZED) image (apart from any parts of the drawn image containing the current BACKGROUND COLOR... these parts will be transparent).

The menu returns.

The VIEW function

Click the VIEW icon... the menu disappears so that you can view the underlying graphic image...

Click the pen on the tablet... the menu returns.

The TRANSLUCENT AIRBRUSH

Click the DRAWING functions icon...

Click the TRANSLUCENT AIRBRUSH icon.

Click the SPRAY INTENSITY icon at the base of the menu...

Select the strongest of the three intensities proposed...

Select a large (round shaped) brush...

Click in the BLACK area... the menu disappears and you can try drawing using the TRANSLUCENT AIRBRUSH. As the brush moves over the image, an even tranlucent coat of color is left on the underlying image. This differs from the STANDARD AIRBRUSH which uses a random spray effect.

TRANSLUCENT LINES

Call the menu and click the GEOMETRIC functions icon.

Click the TRANSLUCENT LINES icon.

Click in the BLACK area... the menu disappears...

Draw some TRANSLUCENT LINES (the procedure is the same as that for the standard LINES function).

Each line is drawn over the underlying image using the same effect as the TRANSLUCENT AIRBRUSH.

Note that for both the TRANSLUCENT LINES and the TRANSLUCENT AIRBRUSH, the effect becomes progressively opaque as more and more coats are layed over the same part of the image.

The COLORIZING BRUSH

Call the menu and click the COLOR functions icon.

Click the COLORIZING BRUSH icon.

Click in the BLACK area... the menu disappears...

Select a color from the palette with which to colorize... then draw over the screen image.

As the brush passes, the contrast of the image remains unaltered but the chrominance is transformed to that of the color you selected.

Note that selecting a BLACK or GREY will have the effect of completely removing the color element as the brush passes. Selecting the color WHITE will have no effect... (the previously selected color will be used for colorizing). Note also that it is not possible to colorize parts of the image which are BLACK.

The BLENDING BRUSH

Call the menu and click the BLENDING BRUSH icon.

Click the SELECT BRUSH icon at the base of the screen... two brush sizes are offered. Select the LARGEST of the two brushes.

Exit from the menu by clicking in the BLACK area.

Move the brush slowly over a part of the image (keeping the tip of the pen depressed)... the image beneath the brush is blended.

This function is useful when you wish to 'soft-focus' a detail of the image, or to blend in the rough edges after performing a copy and paste.

Chapter 3 - quick reference section

Quick reference section

Note that the MEMORY PLANE COPY & PASTE function requires the presence of either MEMORY EXTENSION 1/DISK (DG-150) or MEMORY EXTENSION 2 (DG-155). **Ⓜ**

Airbrush (spray intensity)	For any of the functions involving the STANDARD AIRBRUSH or TRANSLUCENT AIRBRUSH effect, the intensity of the 'spray' can be selected from a choice of three using this icon.	
Airbrush (translucent)	Paints the image beneath the cursor with a flat (even) coat of color. Access is available to a selection of brush shapes and 3 spray intensities (levels of translucence), as well as all the normal color/palette functions.	
Blending brush	This function (which amounts to a freehand antialiasing) blends the colors of the image beneath the cursor. The effect is that any hard edges become 'de-focused'. This function is very useful for blending in an image that has been 'cut out and transfered'.	
Colorizing (freehand)	The image beneath the brush is painted with the current color without the contrast of the image being altered.	
Connection (composite video camera for digitizing in black & white)	SILVER rear panel	
Digitizing (black & white)	Digitizes images from a video camera or VCR, to 32, 16, 8, 4 or 2 grey levels. Colors may then be assigned to each of the grey levels using an RGB color mixer. This colorizing effect may be performed on 'live' video, or frozen as a graphic screen.	DIGIT B W
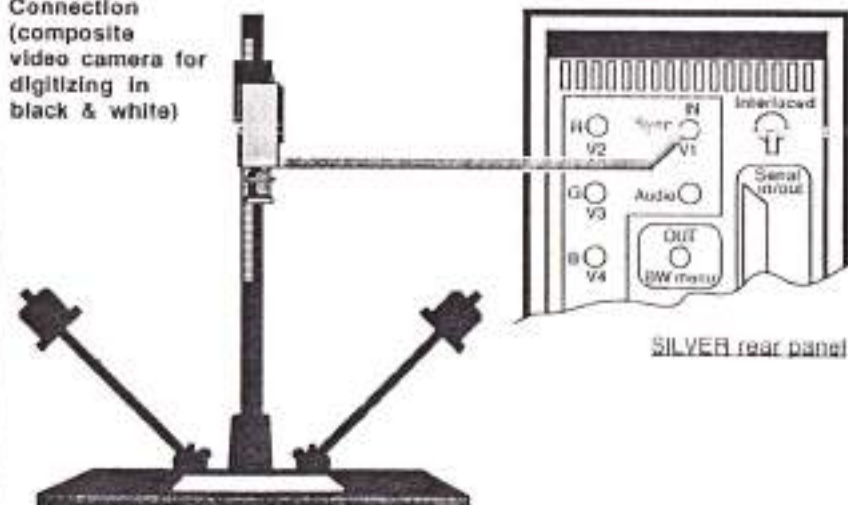
Lines (translucent)	Identical to the standard LINES function except that the lines are translucent (as if drawn using the TRANSLUCENT AIRBRUSH function), and as such, one of three levels of translucence is selectable.	
Memory plane Ⓜ (copy & paste)	A rectangular section of screen image or the whole screen can be copied from an image stored in one of the memory planes of the extension and pasted into the current screen image. Note that the currently defined BACKGROUND COLOR is considered as transparent... this means that irregular shaped 'objects' may be transported between images on a transparent background.	
View	Permits the menu display to be temporarily removed in order to view the underlying graphic image. Note that this icon will appear in all of the function groups for most SILVER applications.	

GRAF 2
User manual

GRAF 65000

Congratulations on your decision to purchase this product. The SILVER videographic workstation has been developed as the result of five years of research into the needs of professionals in the field of videographic creation and image treatment. The SILVER philosophy combines the latest technology, a flexible approach and the highest standards of construction to offer you a power and flexibility unrivalled at any price.

GRAF 2 (DG-GR2)

GRAF 2 offers advanced graphic functions to extend
the capabilities of GRAF 65000 (and other SILVER
applications such as LOGOTEXT 1).

The new functions will appear within the existing application's menus.
Either the MEMORY EXTENSION 1/DISK (DG-150) or MEMORY
EXTENSION 2 (DG-155) are required in order for any of the GRAF 2
functions to operate. ⓜ

Drawing functions

Antialiased (smooth) freehand line drawing option

Multi-function zoom (with access to all functions)

Layout functions

Copy & paste with rotation of copied object

Copy & paste with re-sizing of copied object *

An option is available to either respect or ignore
the original horizontal/vertical ratio...

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* The COPY & PASTE WITH RE-SIZING function is used by
LOGOTEXT for automatic re-sizing of individual characters
or entire fonts.

Demonstration disk

Certain application cartridges are accompanied by a demonstration disk.
Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in
order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1
(DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an
animated sequence and is loaded as follows...

PROJECT — Click the PROJECT icon at the top of the menu.

LOAD — Click the LOAD icon.

overwrite — (If there is a sequence already in memory) click
the "LOAD overwrite" option.

DEMO — When asked which sequence to load, position
the cursor over "DEMO" and click the pen.

PLAY — Click the PLAY icon... the demonstration
sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image
(called "IMAGE") is included on the disk. Use this as a background or
keep it for your personal image bank (a different image is supplied with
each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the
backing strip and stick the label on the outside of the box. When the box
is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 - introduction

About GRAF 2

GRAF 2 offers advanced graphic functions to extend the capabilities of GRAF 65000 (and other SILVER applications such as LOGOTEXT 1). The new functions will appear within the existing application's menus.

- An ANTIALIASING option to enhance GRAF 65000's FREEHAND function. Lines can now be drawn freehand and automatically antialiased to remove stepping effects on curves, diagonals etc...

- The MULTIFUNCTION ZOOM offers the possibility of using any of GRAF 65000's functions (or those of other applications) while in zoom mode (16x magnification).

- COPY & PASTE WITH RE-SIZING. This new functions permits a section (or all) of the screen image to be copied elsewhere on screen with complete freedom to redefine the size and proportions of the destination. Note that this function is also used by the LOGOTEXT 1 application for automatic re-sizing of character fonts.

- COPY & PASTE WITH ROTATION permits a section of the screen image to be copied elsewhere on screen whereby the destination image may be rotated to any angle.

In order to use the new functions offered by GRAF 2 you will need either MEMORY EXTENSION 1/DISK (DG-150) or MEMORY EXTENSION 2 (DG-155) connected to your system.

Where to find the new functions

Within GRAF 65000 the four new functions can be found in the following function groups...

Antialiased freehand
Multifunction zoom
} DRAWING functions

Copy & paste with re-sizing
Copy & paste with rotation
} LAYOUT functions

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

ie :

2. Icons exclusive to the manual (depicting a physical action)

ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

Click the tip of the pen on the tablet (then release).

Press the button on the barrel of the pen.

Click the tip of the pen on the tablet WITHOUT releasing.

Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :

Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).

This indicates that you should type something on the SILVER's keyboard.

Chapter 2 - a guided tour

Click the GRAF 65000 icon at the top of the menu (this is where all of the GRAF 2 functions can be found)... the DRAWING type functions are already selected.

ANTIALIASED FREEHAND drawing

Click the DRAWING FUNCTIONS icon

Click the FREEHAND icon... notice that a new option icon is present at the base of the menu. This is the ANTIALIASING ON/OFF icon.

In its default state this icon indicates antialiasing OFF... (the icon represents the stepping that appears when lines are NOT antialiased)... click the icon...

The icon now indicates that antialiasing is ON.

Exit from the menu (by clicking in the BLACK area of the screen)... the palette and cursor are displayed.

Draw one or two lines (in different colors) in the same way as you would for normal FREEHAND.
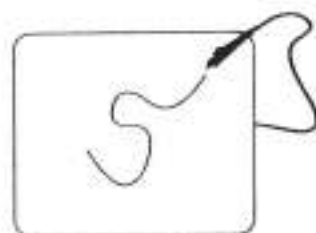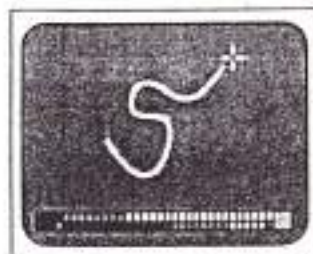
Note that whatever colors you select the lines are always white... don't worry... this is only temporary...

Click at the BASE of the tablet...

The white lines disappear from the screen... a 'countdown' is displayed while each line is redrawn antialiased in its respective color.

Draw some more lines... then press the button on the pen... the 'temporary' lines disappear.

Entering MULTIFUNCTION ZOOM mode

Call the menu (by clicking at the base of the tablet) then click the MULTIFUNCTION ZOOM icon...

The menu disappears and rectangle (representing the area of screen to magnify) is displayed superimposed over the graphic image.

Click INSIDE the rectangle and move the pen over the tablet... the rectangle follows...
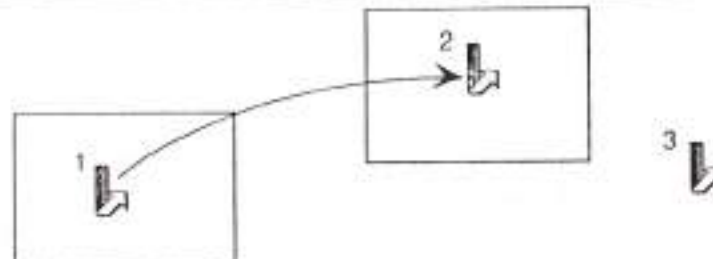
Position the rectangle over the area to be magnified... then click the pen on the tablet... the rectangle is frozen in position once more.

When you are happy with the area to be magnified, click the pen OUTSIDE the rectangle...

The area of screen that you have just defined is magnified (16x)... the menu returns.

MULTIFUNCTION ZOOM mode is now ON... but you can continue to use GRAF 65000 (or any of the other applications) as you would normally.

Drawing in MULTIFUNCTION ZOOM mode

Click the FREEHAND function once more...

Antialiasing is NOT needed, so ensure that the icon at the base of the menu displays antialiasing OFF.

Select the largest (round) brush to draw with...
then exit from the menu and draw in the centre of the screen, using different colors.

Returning to NORMAL mode

Call the menu and click the MULTIFUNCTION ZOOM icon... a message appears...

Compression ?
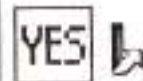
Click YES... the image returns to normal size and is reintegrated with the rest of the screen.

Note : Since in ZOOM mode the effective resolution is 16 times the normal resolution, any changes made to the magnified image will be recalculated for the return to normal size. Where curves, diagonals, etc. have been added under zoom mode, an antialiasing effect will result. For this reason, it is often useful to draw or modify shapes under zoom mode for an automatic smoothing effect on subsequent reduction.

COPY & PASTE WITH RE-SIZING

Call the menu and click the LAYOUT functions icon.

Click the RE-SIZING icon... then exit from the menu (by clicking in the BLACK area)... a square shaped cursor is displayed over your image.

Defining the source rectangle

The source (the area to copy from) is defined by means of the two opposite corners of a rectangle.

Position the cursor for one of the corners of the source rectangle then click the pen...

Move the pen... an 'elastic' rectangle (drawn with a dotted line) forms between the corner you have just fixed and the opposite corner (controlled by the pen).

Click the pen to fix the second corner (and thus define the source rectangle).

Defining the destination rectangle

The destination (the area to copy to) is defined in the same way as for the source rectangle.

Position the cursor for one of the corners of the destination rectangle then click the pen...

Move the pen... an 'elastic' rectangle (drawn with a continuous line) forms between the corner you have just fixed and the opposite corner (controlled by the pen).

destination
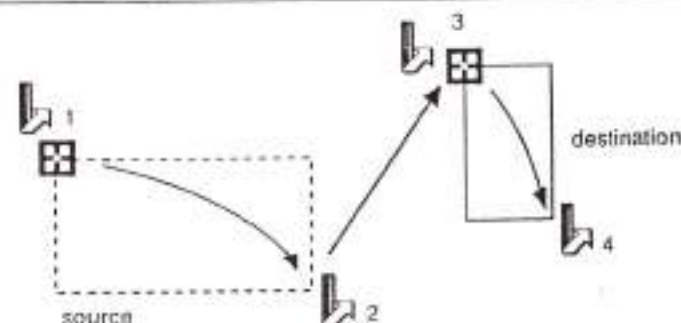
source

Click the pen to fix the second corner (and thus define the destination rectangle).

Repositioning the rectangles

Click the pen INSIDE the SOURCE rectangle... it is no longer fixed and you can reposition it anywhere on screen...

Position the rectangle... then click the pen on the tablet to fix it once more...

Click the pen INSIDE the DESTINATION rectangle... it is no longer fixed and you can reposition it anywhere on screen...

Position the rectangle... then click the pen on the tablet to fix it once more...

Note that you can go back one step in the procedure (to redefine the destination rectangle) by pressing the button on the pen.

Pressing the button a second time will take you back another step (to redefine the source rectangle as well).

Executing the copy

When you are happy with the proportions and positioning of both rectangles...

... click ON the screen OUTSIDE the SOURCE and OUTSIDE the DESTINATION rectangle... the image transfers from source to destination (with the size and proportions recalculated accordingly).

Note that the copy process can be aborted by keeping the tip of the pen depressed on the tablet until the cursor and source rectangle reappear...

When the image is completely copied, the source rectangle (dotted line) reappears together with the square cursor... you can redefine the destination rectangle as described above... or press the button on the pen to redefine the source as well.

Fixed or variable copy ratio

Call the menu... you will see an icon at the base of the menu... this indicates either FIXED or VARIABLE copy ratio. This option allows you the choice of either a copy with variable size but fixed ratio (between horizontal and vertical axes) or a copy with freely variable proportions.
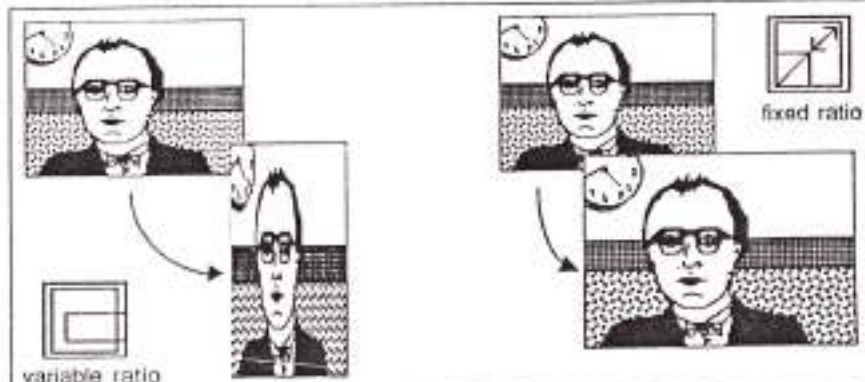
fixed ratio

variable ratio

A note for users of PROJECT 1

If you are using PROJECT 1 to record a sequence, the following options are offered when you first click the COPY & PASTE WITH RE-SIZING icon...

A message appears...

Do you want to recalculate compression with PROJECT ?

If you answer YES... the positions and sizes of the source and destination rectangles are memorized by the sequence... and when the sequence is played back the copy and paste will take place again, using the image on screen at that time.

If however you answer NO... the IMAGE ITSELF that is copied into the destination rectangle is memorized... and when the sequence is played back that same image will appear (instantaneously) regardless of the image in the 'source' position at that time.

COPY & PASTE WITH ROTATION

Call the menu and click the ROTATION icon...
the menu disappears and a square shaped cursor is
visible over your image.

Defining the source rectangle

The source (the area to copy from) is defined by means
of the two opposite corners of a rectangle.

Position the cursor for one of the corners of the source
rectangle then click the pen...

Move the pen... an 'elastic' rectangle (drawn with a
dotted line) forms between the corner you have just
fixed and the opposite corner (controlled by the pen).

Click the pen to fix the second corner (and thus define
the source rectangle).

Move the pen... the source rectangle (dotted line) is
fixed in position and a second rectangle (destination)
appears superimposed on the first.
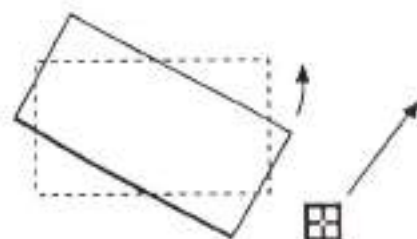
The destination rectangle is capable of rotating on an
axis at its centre... and the angle of rotation depends
upon the cursor's position. The side of the destination
rectangle that represents the right side of the source
always faces in the direction of the cursor and the base
of the rectangle is distinguishable by a double line
thickness.

Defining the rotation angle for the destination

Rotate the destination rectangle until you are happy with
its inclination... then click the pen on the tablet... both
source and destination rectangles are now fixed.

Repositioning the rectangles

Click the pen INSIDE the DESTINATION rectangle... it is
no longer fixed and you can reposition it anywhere on
screen...

Position the rectangle... then click the pen on the tablet
to fix it once more...

Click the pen INSIDE the SOURCE rectangle... it is no
longer fixed and you can reposition it anywhere on
screen...

Position the rectangle... then click the pen on the tablet
to fix it once more...

Press the button on the pen... you can rotate the
destination rectangle once more (as described above).

Click the pen on the tablet to fix its angle of rotation.

Executing the copy

When you are happy with the proportions and
positioning of both rectangles...

... click ON the screen OUTSIDE the SOURCE and
OUTSIDE the DESTINATION rectangle... a 'countdown'
is displayed at the base of the screen while the rotation
calculations are made...

Note that the process can be aborted by keeping the tip of the pen depressed on the tablet until the cursor and both rectangles reappear...

When the countdown reaches zero the image transfers from source to destination (rotated to the angle that you have defined).

The square cursor and the source and destination rectangles reappear...

A note for users of PROJECT 1

If you are using PROJECT 1 to record a sequence, the following options are offered when you first click the COPY & PASTE WITH ROTATION icon...

A message appears...

> Do you want to recalculate
> rotation with PROJECT ?

YES ↳

If you answer YES... the positions of the source and destination rectangles and rotation angle are memorized by the sequence... and when the sequence is played back the copy and paste will take place again, using the image on screen at that time.

NO ↳

If however you answer NO... the IMAGE ITSELF that is rotated and copied into the destination rectangle is memorized... and when the sequence is played back that same image will appear instantaneously regardless of the image in the 'source' position at that time.

Quick reference section

Note that all GRAF 2 functions require the presence of either MEMORY EXTENSION 1/DISK (DG-150) or MEMORY EXTENSION 2 (DG-155). Ⓜ

Antialiasing	This is a technique whereby curves and diagonals are 'smoothed' to remove the stepping effect resulting from the limited definition in a digitally generated image. Intermediate colors are calculated and generated (in the zone between the form and background).
Copy & paste (with re-sizing)	Permits a section (or all) of the screen image to be copied elsewhere on screen with complete freedom to redefine the size and proportions of the destination. The option of free or fixed horizontal/vertical ratio for the copy is offered... Free ratio Fixed ratio Note that this function is also used by the LOGOTEXT 1 application for automatic re-sizing of character fonts.
Copy & paste (with rotation)	COPY & PASTE WITH ROTATION permits a section of the screen image to be copied elsewhere on screen whereby the destination image may be rotated to any angle. The maximum area that can be rotated using this function is 7000 points (roughly 1/14 of the total screen area).
Freehand (antialiased)	GRAF 2 adds an ANTIALIASING option to enhance GRAF 65000's FREEHAND function. Lines can now be drawn freehand and automatically antialiased to remove stepping effects on curves, diagonals etc... The ANTIALIASING ON/OFF icon indicates whether lines will be drawn antialiased or not. Antialiasing ON Antialiasing OFF
Zoom (multifunction)	The MULTIFUNCTION ZOOM offers the possibility of using any of GRAF 65000's functions (or those of other applications) while in zoom mode. On entering zoom mode, a section of screen is magnified 16x... you can then continue to work as in normal mode. Clicking the icon a second time will reduce the current image and reintegrate it with the previous screen.

LOGOTEXT 1
User manual

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

LOGOTEXT 1 (DG-LO1)

LOGOTEXT1 offers sophisticated and highly advanced character font creation and generation functions. Character sets and logotypes can be taken directly from paper by means of a video camera ⓜ

- Characters are antialiased (smoothed) by 32 transparence levels...
- Full (65000) color characters/logos can be assigned to the fonts...
- A full range of style options and text functions is provided, together with the possibility to resize characters or complete fonts**...
- Additional ready-made character fonts are available on cartridge...

Disk/memory functions ⓜ

- Save font to disk
- Load font from disk
- Merge font from disk
- Select cartridge/disk font
- Clear memory
- Auto save
- List memory
- Undo

Layout functions ⓜ

- Grab characters
- B&W or color
- Assign character
- Delete character
- Un-delete
- Resize characters**
- Adjust contrast
- Cut work area
- Character frame
- Edit character
- Undo last edit
- Modify character

Text functions

- X-Y positioning
- X-Y information
- Positioning by 'phantom'
- Input text
- Auto-centering
- Video inlay (not U.S.)

Style functions

- Palette functions
- Character color 1
- Character color 2
- Relief color
- Gradation
- Text inclination
- Embossed effect
- Normal
- Opaque character background
- Mix colors
- Italics
- Outline
- Negative
- Lighting angle
- Shadow/relief depth
- Shadow effect
- Relief effect
- Font information

ⓜ To use of the character edition and disk functions, the MEMORY EXTENSION 1/DISK (DG-150) must be present. A video camera is also required in order to digitize characters from examples on paper.
** Re-sizing of characters can be performed only if GRAF 2 is installed in one of the application slots of the system.

For users with the PC/AT LINK (DG 140/145) it is possible to select the PC or AT disk for loading/saving character fonts.

Demonstration disk

A three and a half inch demonstration disk is included with this cartridge. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

Click the PROJECT icon at the top of the menu.

Click the LOAD icon.

overwrite (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 - introduction

About LOGOTEXT 1

LOGOTEXT 1 is a sophisticated and highly advanced character generator and editor.

Here are just some of the possibilities :

- Character fonts and logos grabbed from examples on paper using a video camera.

- Characters antialiased by 16 levels of transparence to eliminate step effects on curves and diagonals.

- Full (65000) color characters or logos can be digitized, edited and assigned to the keyboard.

- Pre-designed character fonts available in the form of ROM cartridges.

- Full implementation of special effects such as shadows, relief, text direction, inverse video, color gradations, embossing etc.

- Character fonts can be saved/loaded to/from floppy disk or hard disk (with PC/AT LINK configuration)

- The size of individual characters or whole fonts can be automatically changed (providing GRAF2 is present in one of the slots).

There are two possible working configurations for LOGOTEXT...

Users WITHOUT the MEMORY EXTENSION/DISK (DG-150) do not have possibility to create or modify character fonts. For this reason, only the functions concerned with displaying characters (text generator, style options etc.) will be presented in the LOGOTEXT 1 menu.

For users WITH THE MEMORY EXTENSION/DISK... CLICK GRAF 65000 - THEN LOGOTEXT.

All four function groups will be presented in the LOGOTEXT 1 menu, giving full access to character font creation and modification functions, as well as the possibility to save/load/merge character fonts to/from disk.

What you will need

<ins>For use as a character generator only...</ins>
- SILVER (DG-100) plus color monitor
- Character fonts supplied on CARTRIDGE

<ins>For creation and modification of character fonts...</ins>
- SILVER (DG-100) plus color monitor
- MEMORY extension/disk (DG-150)
- Black & white VIDEO CAMERA
  or
  Color VIDEO CAMERA with RGB OUTPUT
  or
  Color composite VIDEO CAMERA + DECODER (eg: FADEC DG-110)
- Camera stand and floodlighting

<ins>Optional (in addition to the above)</ins>
- PC/AT link kit (DG-140/5) plus IBM PC or AT (or compatible), if you wish to save/load character fonts to/from the computer's hard disk
- GRAF 2 (application DG-GR2) if you wish to re-size character fonts

About the manual

The manual is divided into two main sections - a 'guided tour', together with some useful advice, and a 'quick reference' section (covering most of LOGOTEXT's functions in alphabetical order).

It is recommended that you follow the guided tour which will take you through the digitizing of characters from paper using a video camera ; the creation of characters in black and white and in color ; modification, re-sizing, disk functions etc., and using the characters to display text on the screen using the many style and layout options available.

Take your time to fully understand the important elements in character font creation, like antialiasing, contrast, character alignment etc...

The 'quick reference' section will be useful if you forget what a particular icon is used for, want to know what is meant by 'cursor mobility', or how to connect the SILVER to a color video camera, etc...

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

ie :

2. Icons exclusive to the manual (depicting a physical action)

ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

	Click the tip of the pen on the tablet (then release).
	Press the button on the barrel of the pen.
	Click the tip of the pen on the tablet WITHOUT releasing.
	Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :
	Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).
	This indicates that you should type something on the SILVER's keyboard.

Black & white video camera

SILVER rear panel

Adjust the contrast (using the camera's aperture ring), as well as the image focus.

To help ensure that the characters are level, a 'horizontal ruler' is superimposed over the screen image.

ABCDEF
GHIJKL
MNOPQ

Digitizing characters from paper

Connect the SILVER and camera as shown (for color camera see reference section). Switch on the MEMORY extension/disk, the SILVER, camera and floodlighting.

LOGOTEXT

Click LOGOTEXT from the SILVER's menu.

Click the EDITION icon.
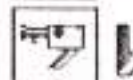
Click the CAMERA FUNCTION icon.

Click in the centre of the tablet...
The image from the camera will appear on the screen.

Position the sheet of characters beneath the camera and adjust the lighting so that the characters are as evenly lit as possible. Adjust the size of the image (remembering that this will be the maximum size for the characters that will eventually be created).

To adjust the height of the ruler, press the button on the pen... the ruler will move up or down (depending on the pen's position). Release the button to fix the ruler.

Having adjusted the camera image for size, contrast and focus, & having ensured that the characters are level...

Click in the CENTRE of the tablet... the image is frozen and a cross-shaped cursor appears on the screen.

Click at the BASE of the tablet. The CONTRAST icon appears at the bottom of the screen.

Click the CONTRAST icon...
The CONTRAST ADJUSTMENT BARS appear.

(black)   (white)

level 0 (black)   range of levels remaining   level 31 (white)
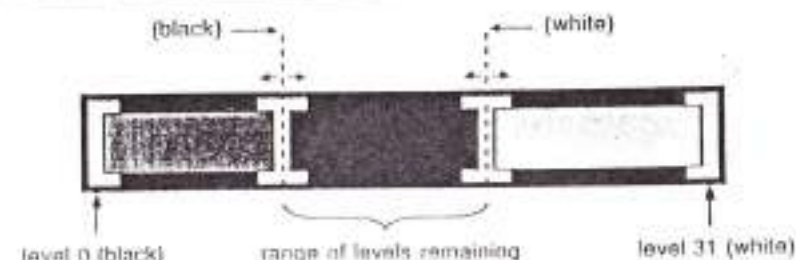
Click WITHOUT RELEASING, on the right edge of the blue colored bar, and move the pen to the right... The number of grey levels in the image decreases as the lower levels change to black.

Move the bar to the left, and the lower grey levels return.

Repeat the procedure using this time the yellow bar. This bar represents the grey levels at the upper end of the range. As the bar is moved to the left, the upper levels change progressively to white (level 31).

The distance between the bars represents the remaining range of grey levels (if the bars are touching, only two levels will be present in the image - black and white).

Contrast is the MOST CRITICAL factor in determining the quality of a character. Please take the time to read the advice on contrast given at the back of the manual.

ZOOM

Click the pen over a point on the image...
A window appears, containing the section where you clicked, magnified so as to clearly show the different grey levels. You can click anywhere over your image to view that section enlarged.

Move the cursor OVER the zoom window, and press the button on the pen... the window disappears.

BLUE and YELLOW

Move OUTSIDE the zoom window and press the button on the pen...

Any 'PURE BLACK' (level 0) in your image will be displayed as BLUE, and any 'PURE WHITE' (level 31) will be displayed as YELLOW.

Press the button on the pen (OUTSIDE the zoom window)... the blue and yellow revert to BLACK and WHITE.

Adjust the contrast of your image (as described above), making sure that you have left a wide enough range of grey levels to ensure a good antialiasing of the forms.

When you are happy with the contrast of your image, click the OK icon (to the right of the adjustment bars).

The CONTRAST and END icons appear at the base of the screen. To validate your contrast, click the END icon.

The screen image (with the contrast adjusted) will be memorised (to 16 levels of grey).

Cutting out a work area

The 'cross-hair' cursor appears over your image. At this stage we wish to cut out the part of the screen image that contains the characters we will use (the area will be defined by two opposite corners of a rectangle).

Click over one of the corners for the rectangle to cut out. Move the pen... a rectangle forms between the corner where you clicked, and the cursor.

Move to the opposite corner for the rectangle to cut out, and click to fix that corner... the rectangle is defined.
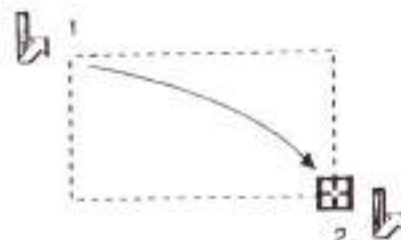
If you wish to recommence the above procedure, press the button on the pen to cancel the defined rectangle.
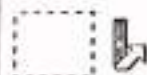
Click INSIDE THE RECTANGLE... move the pen... the rectangle moves also. You can reposition the rectangle over the area that you wish to cut out.

Click once more, the rectangle becomes fixed.

When you are sure of the size and position of the cut-out rectangle, click OUTSIDE THE RECTANGLE. The work area is defined.

A window appears at the top of the screen containing the work area that you have just cut out (actual size)

Beneath this area is the EDITING GRID, which contains a magnified detail from the work area you have cut out.

A B C D E

← window (work area)
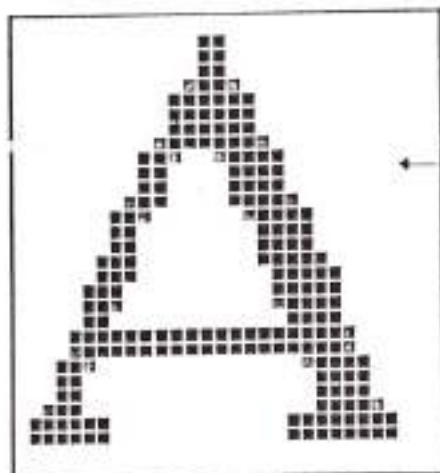
← black area

← editing grid (magnified)

The size of the editing grid, and the degree of magnification depends upon the size of the work area that has been cut out. For this reason, you should avoid cutting out too large an area.

Move the pen over the tablet... you will see a square shaped cursor on the screen. The color of the cursor will depend on the area of the screen where it is currently positioned...

RED/GREEN : within the editing grid
BLUE : within the work area window
WHITE : over the rest of the screen

RED cursor

Move the cursor over the EDITING GRID... it becomes red.

Click different points in the grid... they will be colored with the current color (black by default).

By clicking (WITHOUT RELEASING) and moving the pen, you can draw within the editing grid area.

GREEN cursor (selecting color for drawing)

Keeping the cursor within the EDITING GRID... Press the button on the pen... the cursor turns green.

While KEEPING THE BUTTON PRESSED, click the pen on a point that contains the color you wish to use (one of the grey tones from within your image). Release the button... the cursor turns red - the color is memorised.

WHITE cursor

Move the cursor into the black part of the screen (where it is within neither the EDITING GRID nor the WINDOW.

With the cursor to the right side of the screen, press the button on the pen. All 'PURE BLACKS' will be displayed as BLUE, and all 'PURE WHITES' as YELLOW (for both the window and the editing grid).

Press the button once more... the BLUE reverts to BLACK and the YELLOW to WHITE.

Move to the left hand side of the screen (keeping the cursor in the BLACK area).

Press the button on the pen...

The levels of grey in your image (in the editing grid and in the window) will be reversed. Level 0 (pure black) becomes level 15 (pure white), level 1 becomes level 14, and so on... in effect the image becomes negative.

Press the button once more, the image reverts to its previous state.

BLUE cursor

Move the pen up into the work area window... a small blue cursor appears inside the window. Simultaneously, a large blue cursor appears in the editing grid (magnified).
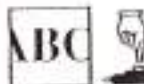
Press the button on the pen (DON'T CLICK)... The detail beneath the cursor (from the window) is displayed (magnified) inside the editing grid.

Cutting out a character

The dimensions of each character will be defined by a rectangular frame. This frame can be drawn or modified at any stage during the editing process.

Move the cursor into the work area window and click the top left corner of the character.

Move the pen down and to the right... a rectangle forms between the corner where you clicked, and the cursor.

Click the bottom right corner for the character frame.

Modifying the character frame

You can modify the frame using the following keys...

The keyboard CURSOR KEYS will move the character frame by one pixel at a time in the direction of the arrow shown on that key...

$\leftarrow$ $\rightarrow$ $\uparrow$ $\downarrow$
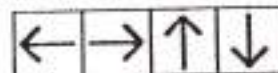
The following keys can be used to move the frame in larger steps (of one character frame's width or height)...
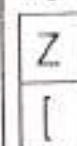
Z   toward the right   X   upward
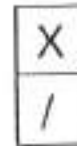
[toward the left   /   downward

The size of the frame can be modified by using the following keys...
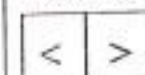
<   >   width (+/-)   ]   ß   height (+/-)
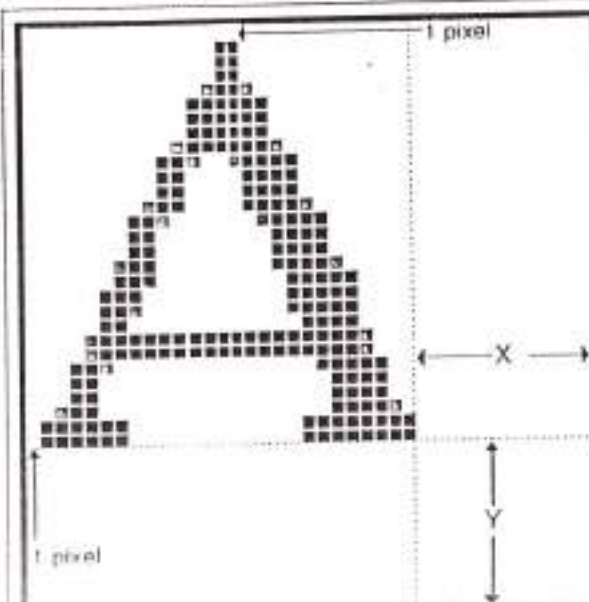
The distances X and Y must be taken into account in order to give a correct spacing between characters typed on the screen.

It is also advisable to leave one pixel to the left and at the top of the character.

ESC You can recall a numericaly defined character frame by pressing the 'ESC' key... the frame will appear at the top left corner of the work area.

Note that it is also possible to move the character frame by one pixel at a time (in the direction toward the cursor) by clicking in the BLACK area around the EDITING GRID, or one frame width left or right or one frame height upward by clicking (with a white cursor) in the BLACK area around the WORK AREA window.

Assigning the character to the font

Having drawn the character definition frame (as described above), and cleaned up the form and the background of that character...

Call the menu by clicking at the BASE of the tablet.

Click the ASSIGN icon.

Type in the key to assign :

Type the character...

Character ... saved

Your character has been assigned to the font.

Click the EDIT icon.

The window containing the work area you cut out previously returns to the screen, together with the editing window containing enlarged detail from the work area. The character definition frame for the character you have just defined remains in its previous position.

Use the procedure described above to define and assign more characters to the character font.

Typing some characters on the screen

We will assume at this stage that you have assigned to the character font (as described above) the characters A, B and C.

Text can be either typed directly to the screen, or input as a block and positioned over the image. Each of these methods is represented by its own group of functions.

Call the menu by clicking at the BASE of the tablet.

Click the TEXT ENTRY BY CURSOR icon (this group of functions allows you to type text directly on screen, much like a word processor).

An identical icon is displayed among the functions of this group (below)... click that icon.

The menu disappears, and the text cursor can be seen over your image. Move the pen over the tablet... the cursor follows.

Click over your image where you wish to start typing... the cursor is fixed in position.

Type a character... The character appears on your image and the cursor is displaced to the right of that character.

You can move the cursor one pixel at a time in any of four directions, by pressing the relevant arrow key on the keyboard...

$\leftarrow$ $\rightarrow$ $\uparrow$ $\downarrow$
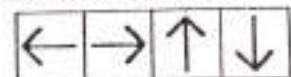
You can also move the cursor to the start of a new character line (below the first character typed), by pressing RETURN on the keyboard.

If you make a mistake, you can delete each character (or cursor movement) one step at a time, by pressing the DEL key on the keyboard

DEL

Position the pen over the tablet so as to be at a greater distance horizontally than vertically relative to the cursor's position.

Press the button on the pen.
Move the pen over the tablet, the cursor will follow the pen, but in one plane only (horizontally).

Click to fix the cursor's position once more.

Position the pen over the tablet so as to be at a greater distance vertically than horizontally relative to the cursor's position.

Press the button on the pen.
Move the pen over the tablet, the cursor will follow the pen, but in one plane only (vertically this time).
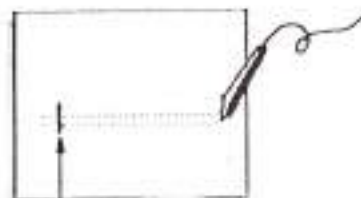
In this example, the horizontal distance from cursor to pen is greater than the vertical distance... horizontal mobility is selected.
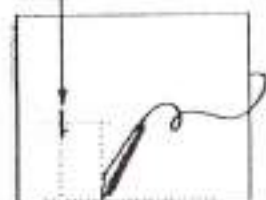
cursor position

In this example, the vertical distance from cursor to pen is greater than the horizontal distance... vertical mobility is selected.

Click to fix the cursor's position once more.

Press the button on the pen.

Press the button on the pen a SECOND time...
The cursor is now COMPLETELY mobile and will follow the pen over the entire screen area.

Press the button on the pen a THIRD time...

The cursor is once again fixed on screen, just to the right of the last character typed (or in the position where you last clicked). The cursor now has zero mobility (it will not respond to the pen's movement).

As you have seen here, there are three possible levels of mobility, and each subsequent press of the button advances the cycle by one level.

Some of the different STYLE options
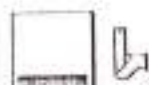
Call the menu by clicking at the base of the tablet.
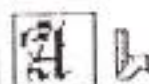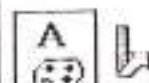
Click the STYLE icon.

Click the CHARACTER COLOR icon... the menu disappears and the current palette is displayed.

Select a color by clicking the palette or on your image...
The color you have just chosen is the main character color.

The menu returns.
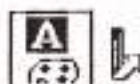
Click the 2nd. CHARACTER COLOR icon... the menu disappears and the current palette is displayed. Select the second character color as you did for the first.

This color is used wherever a character has two attributed colors... eg: when using a gradation of colors (in which case this would be the bottom color and the main color would be at the top of the gradation).

GRADATED characters

Click the GRADATED CHARACTERS icon... the cross (displayed when the option is NOT selected) disappears.
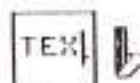
Try out the effect of the gradation by typing some characters on the screen (as described previously).

smooth color gradation — main character color

second character color

Call the menu by clicking at the base of the tablet.
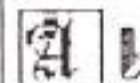
Click the STYLE icon.

Click the CHARACTER RELIEF COLOR icon. This icon defines the color used for relief effects, and for the character's background (when non-transparent).

The menu disappears and the current palette is displayed... select the RELIEF color in the same way as you did for the MAIN and SECOND character colors.

OPAQUE character background

Click the OPAQUE/TRANSPARENT icon so that it is no longer crossed out.

When the icon is crossed out, any characters subsequently printed on screen will be displayed on a transparent background... only the form of the character will be shown. However, if the icon is NOT crossed out (OPAQUE mode), the character will be displayed within a solid rectangle. The color of the rectangle is the same as that defined for the character relief.
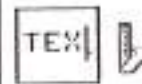
Try out the effect of an OPAQUE character background by typing some text (as described previously).
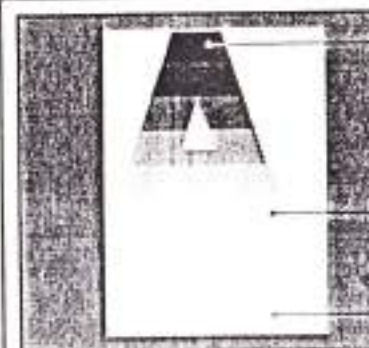
main character color

second character color

character background

Call the menu by clicking at the base of the tablet.
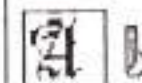
Click the STYLE icon... try out similarly some of the other style options offered in this function group...

...like NEGATIVE characters... where the character and character background attributes are reversed...

...or OUTLINED characters, whereby the antialiased zone uses the defined character background color to produce an outline effect around the character.

Positioning by 'PHANTOM'

Click the PHANTOM icon.

The same icon appears at the bottom of the screen (but crossed out).
Click the icon to validate PHANTOM mode.
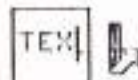
Click the TEXT icon.

Click the pen to fix the cursor on screen.

Type a character... it appears in 'PHANTOM'.

A B   B

Press the button on the pen to obtain mobility level 1.

Press the button a second time to obtain total mobility.

Move the pen over the tablet. You see the character's form moving over the screen image as you move the pen.

Position the character over your image, then click the pen to fix the cursor on the screen once more.

Type the character. It appears 'SOLID' on the screen.

It is by pressing the same key twice that the character will be displayed definitively... if you type a different character, it is that character that will now appear in 'PHANTOM' form.

TEXT BY BLOCK

Click the TEXT BY BLOCK function group icon.

You will see that the functions associated with this group are not exactly the same as for the TEXT BY CURSOR group of functions.

Click the INPUT TEXT icon.

At the base of the screen, you are invited to...

Input text to position :

Type the text...

...then press RETURN on the keyboard.

The menu disappears. A rectangular frame which represents the size of the block of characters to be displayed. Move the pen to position the characters.

Click the pen on the tablet. The characters that you previously input are printed on the screen.

Positioning the block numerically

Call the menu.

Click the XY POSITIONING icon.

Click the HORIZONTAL (X) coordinate icon.

Input X coordinate :

Input a horizontal value (100 say) by clicking on the keypad icons, then click the RETURN icon.

Repeat the procedure to set the VERTICAL (Y) coordinate (as 50 say).

Click the TEXT INPUT icon.

The text you input previously appears in the input line. Click the pen on the tablet to accept the same text.

The menu disappears and the text block is displayed at the coordinates that you have set (100,50).

The block is fixed on screen (zero mobility). Press the button if you wish to change the mobility level.

Automatic centering

Call the menu.
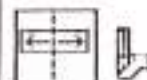
Click the CENTERING icon.
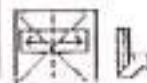
The same icon appears (crossed out) at the bottom of the screen. Click the icon to validate CENTERING.

Click the TEXT INPUT icon.

The text you input previously appears in the input line. Click the pen on the tablet to accept the same text.

The menu disappears and the text block is displayed over your image. Move the pen... the block will move along a vertical axis only. This is the axis defined as 'middle' for the centering function.

Click to print the text on the screen.

Call the menu.

Click the input icon once more.

Input some new text.

Print the new text on the screen. You will see that the text is centered on the vertical axis running through the middle of the first text.
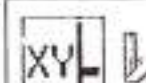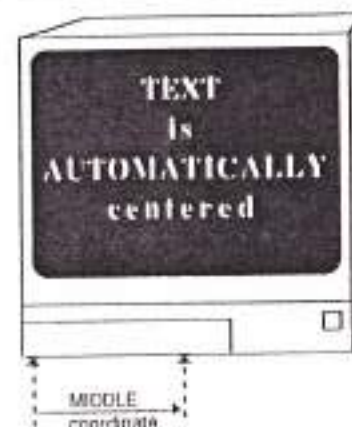
The centering axis can be adjusted from within the XY POSITIONING function. You can try changing the centering axis position by inputting a new MIDDLE value.
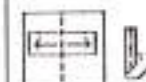
For the time being, CANCEL the CENTERING function and let's move on to some more STYLE options.

Some more style options
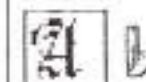
Click the STYLE icon.

Among the style options, you will see an icon with its bottom right corner 'turned up'. This icon gives access to the five character display modes. Click this icon repeatedly to see the five possible modes.

This is NORMAL mode (no effects selected).

This is OPAQUE mode... that is to say the character background is displayed as a solid rectangle.

RELIEF mode... characters displayed with solid edges.

SHADOW mode... a shadow is thrown onto the screen beneath the characters.
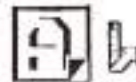
EMBOSSED mode... the effect is as if characters have been 'stamped' into the underlying screen image.

Print some characters on the screen using each of these different display modes.
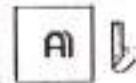
Try using the RELIEF DEPTH icon to select a different thickness for the RELIEF effect, or a different length of throw for the SHADOW effect.
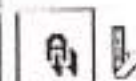
Try also the LIGHTING ANGLE icon... which gives acces to a choice of 8 directions for the RELIEF effect, as well as for the SHADOW and EMBOSSED effects.
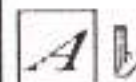
Click the ITALICS icon.

Print some text on the screen.

Try selecting a different writing angle by clicking the writing DIRECTION icon.

Full color characters/logos

It is possible to digitize full color characters or logos for use in a LOGOTEXT font. There are some limitations on the use of color characters. Slightly fewer style options are available, and TEXT BY CURSOR mode must be used (as opposed to BLOCK mode) for input of characters to the screen.

But first we are going to define some color characters and assign them to the font...

You will need a color video camera if you wish to digitize characters in color.

The color digitizing will be done using GRAF 65000, so click the GRAF 65000 icon at the top of the screen.

Click the VIDEO FUNCTIONS icon.

Click the COLOR DIGITIZE icon.

The color image appears on the screen. Arrange your characters/logos beneath the camera and adjust the focus, contrast, lighting etc.

Click to freeze the image.

We have digitized the image of our characters in color, so we can click the LOGOTEXT icon.

Click the EDITION icon.

Since we have already digitized the image, and no further contrast adjustment is possible, we move directly to CUTTING OUT A WORK AREA. You can move directly into this function by clicking this icon.

Cut out your work area in exactly the same way as you did for the black & white characters.

You can now click the EDIT CHARACTER icon...

The work area appears at the top of the screen, and below it is displayed the magnified edit window.

Clean up your character/background etc. as you did for the black & white characters.

Your color character should be antialiased (to a thickness of no more than 2 pixels) on a BLACK background. Use the BLUE/YELLOW option help you identify the black (level 0) in your image.

antialiasing ——— ——— color logo

black background ———
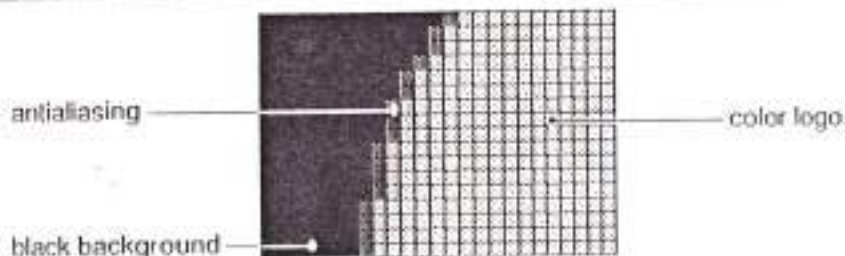
Draw the CHARACTER DEFINITION FRAME around the first character/logo that you want to assign (as before).

Assigning the color character/logo to the font

Call the menu by clicking at the BASE of the tablet.

Click the COLOR/B&W icon.

If necessary, click the icon at the base of the screen, so that the 'COL' half of the icon is displayed in inverse video (indicating the COLOR mode is selected).
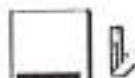
You can now assign the color character to the font as you did for your black & white characters.

Return to the EDIT stage to define and assign any other color characters/logos contained within the work area.

When you have finished defining your color characters, call the menu...

Checking the font information

Click the FONT INFORMATION icon.

The entire character font is displayed at the base of the screen. Active (assigned) characters are displayed in inverse video... green for black & white characters, and yellow for color characters/logos.

Other information is also given, relating to the character font's use of the SILVER's memory.

Using the color characters

Click the TEXT BY CURSOR function group.

Click the INPUT function.

Type some color characters on the screen.

Try out some of the style options. Note that the GRADATED CHARACTER mode will not operate with color characters.

To switch the antialiasing effect on or off, you should click this icon.
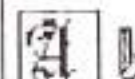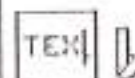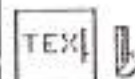
Saving your characters to disk

Call the menu.

Click the DISK FUNCTIONS group icon.

Click the SAVE icon. You will be invited to...

> Type in font name to save :

Type the name for your font.

Check that you have a (prepared) disk in the drive, then press RETURN on the keyboard.

> Font _(your font name)_ saved

Auto save

BEFORE creating a character font, you may choose to validate the AUTOSAVE option. This function saves characters to disk as they are assigned to the keyboard. This is a useful safeguard against power cuts etc. and negates the necessity to save a character font once created.

Click the AUTO SAVE icon, you will be asked....

> Name of auto-save file :

Type the name for the font to auto-save (then RETURN)

Consequently, as you assign each character you define to the font, it will be saved also to disk as part of the character font file that you have created.

Loading a character font from disk

Click the LOAD icon.

A list of fonts contained on the disk will appear on the screen.

If this arrow is displayed, click it to obtain a second page of character fonts.

Click the NAME of the character font you wish to load.

When the font has finished loading, the font information is displayed at the base of the screen.

Merging characters

You can MERGE a character font stored on disk with the current character font (in the SILVER's memory).

Click the DISK FUNCTIONS group icon.

Click the MERGE icon. A list of fonts on disk appears...

Click the name of the character font you wish to merge.

The disk font is merged with the current font, and the font information is shown at the base of the screen.

Note that if the same character exists in both fonts to be merged, the result will be that the current font's version of that character will be overwritten by the disk font's version.

Deleting a character font file

Click the DELETE icon. A list of fonts on disk appears...

Click one of the names displayed... that character font is deleted from the disk.
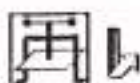
Modifying a character

Click the EDITION FUNCTIONS icon.
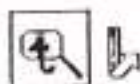
Click the MODIFY CHARACTER icon.

You are invited to...

| Type in the character to edit : |

Type the character on the keyboard.

The character is displayed (actual size) at the top of the screen, and below it is displayed the (magnified) edit grid. You can make any required modifications to the character (as described previously).

When you have finished modifying the character... call the menu by clicking at the base of the tablet.

Assign the new version of the character to the font (overwriting the old version of that character).

The paper bin (undelete)

If you have made a mistake in overwriting a character with a new version (or deleting a character from the font) click the UNDELETE icon.

| Character to retrieve ? : |

Type the character on the keyboard.

The deleted character (or old version) is displayed together with the edit grid. You can reassign the character to the font (as described above).

Note that successive calls to the PAPER BIN function will cycle through all the deleted versions of the character.
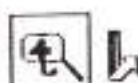
Re-sizing the character font

Click the MODIFY CHARACTER icon.

| Type in the character to edit : |

Type a character on the keyboard (eg : capital A).

The character is displayed for modification (as described previously). All we will do here however is to draw a NEW character definition frame (representing the new size, INSIDE the old frame. Use the blue cursor as you did when defining the original character frame.

1.   2.

old character size   new character size
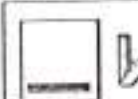
Call the menu.

Click the RE-SIZE icon. You will be asked to...

| Type character (or "all", "big") : |

Type the character you wish to re-size. If you want to automatically re-size the whole font (to the same ratio), type "ALL". (Note that "BIG" is the same as "ALL", but for use with very large characters... and it will overwrite old versions of each character).

Assuming that you have typed "ALL"...
...press RETURN.

As the font is processed, the new characters are displayed one by one, and at the base of the screen, the number of characters still to be processed is indicated...

| 5 characters left |

Note that you can abort the re-sizing by clicking the pen on the tablet (WITHOUT RELEASING the tip) until the process stops...

Otherwise when all the characters have been re-sized...

| Font processed |

Numerically defining the character frame

When you define the frame for each character, for the first time, as modification or during the re-sizing process, you have the option to either draw the frame graphically on screen (as we have already described), or do define the dimensions numerically, by clicking this icon. A frame defined numerically can be recalled at the EDIT stage by pressing the 'ESC' key on the keyboard.

An icon representing the three parameters that can be changed appears at the base of the screen. Click to select a different parameter for modification.

The width for the character frame.

The height for the character frame.

The height of the base line tabs (for editing mode only, since in text mode the height is automatically calculated according to the base line of the capital A in the font).

Use the NUMERIC KEYPAD icons to input new values if required, then click the RETURN icon.

Clearing memory space

Each time a character is deleted, or modified and reassigned, or re-sized, an 'old version' of that character is kept in memory for retrieval in the event of erroneous manipulation. This can mean however that (when dealing with large characters) the available memory space may become saturated.

If you find that you no longer have any need of these 'deleted' characters, you can clear out that space by clicking the GARBAGE COLLECTION function.

Cartridge fonts

Character fonts are provided either on disk (floppy disk or hard disk) in which case they will be loaded into the SILVER's memory, or on cartridges. Font cartridges can be installed in the application slots of the SILVER or extension units. One of the advantages of cartridges is instant access to different fonts. It is not possible however to modify characters from a cartridge font.

To select a font from cartridge (or to select DISK mode as opposed to CARTRIDGE mode)... click this icon.

Floppy disks or hard disks?

If you have the SILVER connected to a PC or AT with hard disk (PC/AT link kit DG-140/5), you have the option to save/load etc. either to floppy disk (in the extension drive) or hard disk (in the PC/AT). The disk functions are the same for both types of disk.

To select either FLOPPY DISK or HARD DISK as the current storage device... click this icon. The selected device is that displayed in inverse.

Chapter 3 - quick reference section

Quick reference section

Antialiasing	This is a technique whereby curves and diagonals of a form are 'smoothed' to remove the stepping effect resulting from the limited definition in a digitally generated image. Intermediate colors are calculated and generated (in the zone between the form and background). See also CONTRAST.
Antialiasing (color)	Characters or logos in color may also be antialiased. The character must be assigned to the font over a black background, and the antialiasing should not exceed a thickness of 2 pixels around the form of the character. To print antialiased color characters on the screen click the ANTIALIASING icon from the STYLE menu.
Assign character	This function assigns to the keyboard the character you have just edited or modified. If a character already exists in the font, you have the option to overwrite. The old version is recoverable (providing memory has not been cleared) by using UNDELETE.
Auto save	During the process of creating a character font, characters are saved to disk as and when they are assigned to the font. This is a useful safety measure in case of power cuts etc. To validate the AUTO SAVE, click this icon. You will be asked for a name to give the file that will be saved on disk.
B&W / Color	A character within the font can be either black and white or color. The status can be selected by clicking this function before assigning a character to the keyboard. If a character from the font is modified, on reassigning, its status will remain unchanged.
Background (of character)	The character's background is usually transparent. By selecting this option, that background will be displayed as a solid rectangle in the color defined as character RELIEF/BACKGROUND color
Base line (of character)	The base line is used for the purposes of aligning characters to be displayed on screen. This line is represented by a small lug on the right hand side of the cursor (in TEXT BY CURSOR mode) or by two small lugs (in TEXT BY BLOCK mode). The height of the base line (above the bottom of each character) is set automatically for the whole font. The height is equal to the space (pure white) between the base of the character defined as "A" (capital) and the bottom of that character's definition frame. The small lugs also appear when you are editing characters (the height can be temporarily set from within the FRAME DEFINITION function)
Camera function	This icon gives access to the start of the procedure for defining a character font (ie. digitizing the image from paper using a video camera)

Cartridge/disk (select)	LOGOTEXT uses character fonts supplied on cartridge as well as on floppy or hard disk. On selecting this icon, all fonts on cartridge can be accessed. When creating or modifying fonts, DISK mode must be enabled from within this function.
Centering	When positioning text by block, the text can be centered automatically around a vertical axis whose x (horizontal) co-ordinate can be defined.
Clear screen	The DUSTBIN icon is used for clearing the screen in the color defined for the background. On clicking this icon, you are given the option to select a new background color before clearing the screen.
Collect garbage	Each time a character is deleted or overwritten, an 'old version' is kept in memory. The memory may become saturated, and can be cleared by clicking this icon.
Color (main) of character	The main color attributed to a character is defined using this icon. When gradated characters are selected, it is this color that will appear at the top of the gradation.
Color (second) of character	The secondary color attributed to a character is defined using this icon. When gradated characters are selected, it is this color that will appear at the bottom of the gradation.
Color (relief) of character	The color used for the edge of a character in RELIEF, for the OUTLINE (when selected) or for the character BACKGROUND (when non transparent) is defined using this icon.
Connection (black & white video camera)	
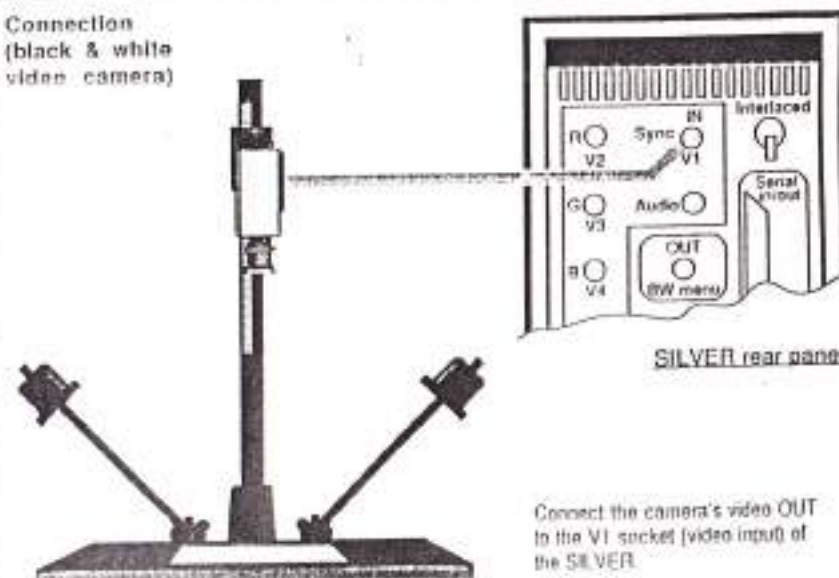
SILVER rear panel

Connect the camera's video OUT to the V1 socket (video input) of the SILVER.

Connection (color video camera)

(Unless your color camera has an RGB output), the composite signal from the camera must be decoded (converted to Red, Green and Blue, plus sync.)

SILVER rear panel

FADEC decoder rear panel
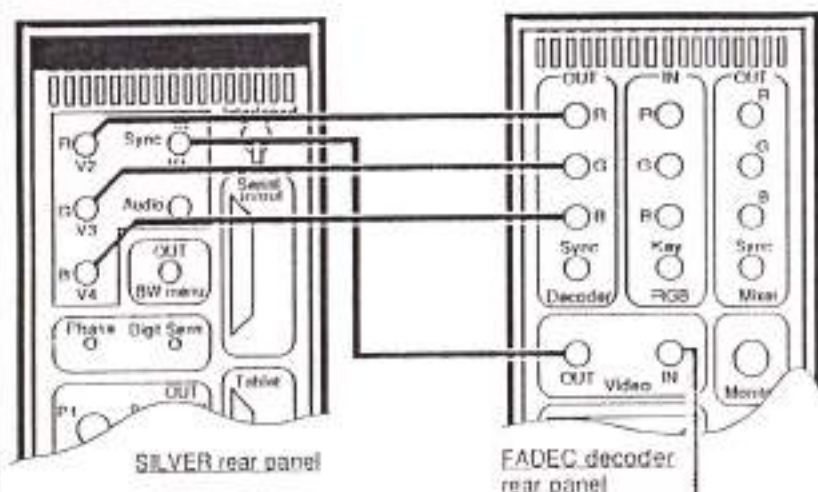
Color video camera

Connect the VIDEO OUT (from the camera) to the VIDEO IN (of the decoder)

Connect the R, G and B OUTs (from the decoder) to the R, G and B INs (of the SILVER)

Connect the VIDEO OUT (from the decoder) to the SYNC IN (of the SILVER)

Contrast

The contrast adjustment bars can be used to diminish or augment the number of grey levels (or degrees of transparence) that compose the image on screen. There are a maximum of 32 levels ranging from 0 (black) to 31 (white). For purposes of clarity, these two extremes may also be represented by blue and yellow. The right hand bar controls the levels from the 'high' end of the scale (31 downward) and the left hand bar the 'low' end (0 upward). By moving either bar toward the other bar, levels are progressively absorbed at that end of the range. By moving apart, the levels are restored.

Contrast (contd.)

After the contrast adjustment, sixteen levels are memorized by LOGOTEXT.

The smoothing out of curves and diagonals (the ANTIALIASING process) requires a sufficient range of grey levels. If there are too few levels remaining in your image, it will be impossible to produce characters of high quality.

16 levels of grey

Black level 0
White level 31

Contrast is the MOST CRITICAL factor in determining the quality of a character. You must spend sufficient time to establish a correct balance and range of transparence.

Cursor mobility

In TEXT BY CURSOR mode, the cursor can have one of three levels of mobility : total, one plane only (horizontal or vertical), or zero mobility. The level can be changed by pressing the button on the pen.

Cut work area

This function allows you to to cut out a section of screen which contains characters or images that you wish to use for your font. The rectangular section of screen defined by this function will become the work area for subsequent editing operations.

Delete character

To delete a character from the font currently in the SILVER's memory (not valid for ROM fonts which cannot be modified). Remember that deleted characters can be recovered by using the UNDELETE function (paper bin), providing that the memory has not been cleared.

Delete font

This function will delete a character font existing on disk.

Direction (of writing)

This icon gives access to a choice of 5 different writing inclinations.

Disk functions

This function group contains functions for LOADING, SAVING, MERGING, DELETING of character fonts from disk

Edit character

On clicking this icon, the area of screen previously defined as the work area will be displayed, together with the magnified editing grid. Characters can then be edited and assigned to the font.

Edition functions	This group contains all the functions concerned with creating and modifying a character font. The edition functions are only available when the MEMORY extension/disk is connected.	
Embossed	The effect produced by this option is as if the characters had been 'stamped' over the background image. The character's defined colors have no effect when using this option.	
Exit	Click this icon when you wish to exit from a function or option selection (with or without having made any choices).	
Font Information	Provides information concerning the current character font, such as font name, which characters have been assigned, whether they are in color or black and white, deleted characters, the available memory space etc.	
Frame definition (numeric)	The rectangular frame which defines a character's boundary can be defined either graphically on screen (during the editing stage) or by inputting horizontal and vertical co-ordinates [using this icon]. The character base line can also be set (for editing purposes only) from within this function.	
Gradated characters	Characters can be displayed with a gradation (vertically) between two colors. These colors are described as MAIN and SECOND character color. The gradation starts at the top of the character (main color) and ends at the BASE LINE (second character). For characters ranging beneath the base line (g, y, p etc.), the descender will be displayed in the second color only)	
Hard disk	If you have installed the PC/AT link (DG-140/DG-145) as part of your system, this icon selects either the PC/AT hard disk or the EXTENSION floppy disk to SAVE, LOAD etc. your fonts.	
Input text	This function should be used when you wish to input text for use within the TEXT BY BLOCK group of functions.	
Italics	In TEXT BY BLOCK mode, characters can be displayed in italic by selecting this option.	
Lighting angle	The direction of a character's SHADOW or its RELIEF edge, will be determined by this option. 8 different angles are available.	
List memory	This icon gives information on the percentage of memory used by the font and the 'undo' as well as percentage of free memory.	
Load	The LOAD function is used to LOAD a character font from a disk in the memory extension (or PC/AT hard disk).	
Merge	The MERGE function will merge together a font from disk and the font currently in the SILVER. If the same character exists in both fonts, it is the SILVER's character that is overwritten.	

Mixer palette	Character color can be selected using the mixer palette (as opposed to the conventional palettes) whereby color components are mixed according to RGB, CMY or HLS systems.	
Modify character	By clicking this icon you can access the edit stage for any character already assigned to the font. After indicating the character, you can perform any required modifications and then reassign that character to the font.	
Negative	The 16 levels of grey that are used for each character are inversed. The character will be displayed in negative. Parts that are normally transparent become opaque, and vice versa. Full color characters/logos can also be displayed in negative.	
Normal	This icon indicates that the following effects are NOT enabled : shadow, relief, embossed, opaque background.	
Outline	Displays characters outlined using the CHARACTER RELIEF/BACKGROUND color. The thickness of the outline will depend upon the thickness of the character's antialiasing zone. This option is only available in TEXT BY CURSOR mode.	
Palette functions	This icon gives access to the functions concerned with management of the color palettes - choice of palette, gradations, display status, etc. This icon is used throughout the SILVER range of applications (see GRAF 65000 manual).	
Phantom	In the TEXT BY CURSOR group of functions it is possible to display a 'phantom' of the character typed before definitively fixing it on the screen (typing the same key a second time will print the character).	
Relief	A relief effect can be given to characters displayed in TEXT BY BLOCK mode. The depth of the relief and the lighting angle are definable.	
Relief depth	This icon gives access to a choice of 4 possible depths for the relief effect of a character (when selected). This option applies also to the SHADOW effect and defines the distance of throw.	
Re-size font	Using this function, you need only create a character font in the largest size you are likely to use, and then reduce the character size to accommodate any size required. The horizontal and vertical proportions can be set independently. Individual characters or the whole font may be processed automatically by inputting (when asked) : the character to be re-sized, "ALL" or "BIG". This latter is used when very large characters are to be processed, the difference being that old versions are NOT stored in memory (therefore not recoverably), so as to save on available space. THIS FUNCTION WILL ONLY BE AVAILABLE IF YOU HAVE GRAF 2 INSTALLED AS PART OF YOUR SYSTEM.	

Restart	On selecting this function, all LOGOTEXT variables are set to their default values and LOGOTEXT reverts to its initial state.	
Ruler (horizontal)	A horizontal line appears while you are digitizing an image. The height of the line may be raised or lowered by pressing the button on the pen. This 'ruler' is useful for ensuring that a series of characters to be digitized is correctly aligned.	
Save	The SAVE function is used to SAVE the SILVER's current character font to floppy disk (or hard disk).	
Shadow	A shadow effect can be given to characters displayed in TEXT BY BLOCK mode. The shadow is thrown onto the screen image by darkening the colors of the points concerned. The shadow's throw (see RELIEF DEPTH) and the lighting angle are definable	
Style options	This icon gives access to the selection of style options such as colors, shadow, relief, embossed effects etc.	
Text by cursor	This icon represents a group of functions concerned with input of text directly to the screen (as opposed to "block" text input). The same icon also appears as a function within the group, and should be selected when you are ready to type the characters.	
Text by block	This icon represents a group of functions whereby a phrase is input, style selections are made, and the text then positioned over the screen image by means of a rectangular block the exact size of the text. Full color characters can NOT be displayed using this method. Maximum size for characters in BLOCK mode is 6000 pixels.	
Undelete	The paper bin function can be used to recover a character that you have deleted or overwritten following a modification. This function can only operate providing you have not used the CLEAR MEMORY function.	
Undo	In either of the text display modes, this function will cancel any modification made to the screen image since the previous function selected	
Undo edit	During the process of editing or modifying a character, you can 'undo' any recent changes to the edit window (since the previous function was selected), by clicking this icon.	
Video ON/OFF	This function allows a live video image (input at V1) to be displayed inlayed within the defined background color. Note: this function not available on NTSC (US) and necessitates a monitor with SCART EUROCONNECTOR	
View	Click this icon to temporarily remove the menu display. Click a second time to call the menu. (GRAF 1 must be present)	

Work area	This is the name given to the area containing a group of digitized characters for integration into a font. During the editing process, the work area appears at the top of the screen. This area should not be too large, as the size of the magnified edit grid will depend on the screen space left. (See also CUT WORK AREA).	
XY information	When this function is validated, the x,y co ordinates of the text cursor or text block are permanently displayed at the bottom of the screen.	
XY positioning	The text block or text cursor can be positioned at exact x,y co ordinates on the screen by using this function.	

PAL ENCODER

MANUAL

P.A.L. ENCODER

The machine is box shaped, 11 cm wide, 28 cm long and 20 cm high. The front side has a trap door, giving access to the various control buttons (Fig. 1). The back face (Fig.3) holds the main entry and exit points, as well as the 220 V or 110 V mains cord, the fuse holder and the on and off button.
When switched on, the machine will display certain signals on the back face.

User advises:

It is a fact that color transitions come out neat only if they are followed by a change in luminosity. The graphic artist will therefore make good use of this advantage during his work, to eventually judge the results in black and white.
Adjacent details of a color graphics become visible and clear in black and white.
This task will have two different effects:
  a) improved color drawing
  b) improved black and white drawing, which is to be taken into account as black and white screens are still widly used, and therefore certain graphical designs could be intelligible without these precautions.

"You first have to get a good black and white picture, with a good contrast level. Color is an extra information which goes over the black and white picture."
This statement may sound a little summarizing, but in fact reflects reality for all systems, even the most recent ones.

Figure 1

The potentiometer (1), accessible to a screwdriver only, enables to adjust the sub-carrier phase throughout an angle of 180°. Lever number (2) enables two choices, either 0 or 180° in this particular phase. Joint action between (1) and (2) enables a 360° adjustment for the phase, one whole turn. This adjustment will be made with the help of a vectorscope, and with the same imperatives as for the horizontal phase. The characteristics of the coder's bar color have to coincide with the references.

Once these adjustments made, any image coming from the coder, will enter the control room adequately and will then be able to undergo all the usual operations possible, (wipes and fades, etc..) and recording.

The warning light (16) reveals the presence of a reference on the Sync in entry; (4) on the back face.

The potentiometer (13), accessible with a screwdriver only, allows to adjust the R.V. B. signals' superior clipping level. The R.V.B. signals are affected by these signals only if they exceed there nominal level. This adjustment is made at our factory, and action will take place at 0,8 volts / 75 ohms level.
Lever number (4) enables to select two modes for the coupling of the synchro: RASTER and GENLOCK.

In the FAST mode, the coupling is immediate. It is the most current mode.
In the SLOW mode, coupling will take place after a research phase. The initial error is corrected, line by line, and can last anything up to 6 seconds. This mode avoids any phase "snock" when coupling takes place with a foreign source, comes from the outside.

The potentiometer (14) accessible with a screwdriver only, allows to adjust the level of action of the saturation limitator circuit (non linear).
This circuit takes action only when the level of saturation associated to the level of luminosity of the components, risk provoking technical aberations to the coded signals. It is totally transparent to "natural images" with the original adjustments. However it is possible to stop completely this circuits' action by switching lever (8) on the "OFF" position.

The button (15) allows adjustment of the saturation level. The normal position is Maximum.
The exit saturation is then 100% of the entry saturation. However, in certain cases, one may wish to reduce the saturation level and we can bring it down to 50% saturation from the source.
A complete desaturation is also possible with the number (12) pushbutton (short action) or with the (10) (continuous action). The picture is of course black and white. The reason behind the choice of this function is that certain conditions allowing a good picture, coded in color, are also required for a good black and white picture.

The specter of a video image can contain high frequency components which can badly interfere with the color under carrier.
This is why 2 filters can be activated by levers 6 and 7. They both have different actions. The first (6) is a trap door specialized in the sub-carrier frequencies, which provokes a "hole" in the frequency band. The second (7) is a low pass filter which stops all high frequencies.
The decision to use either or both filters will be according to the result displayed on screen, mainly in the detail and transition points.
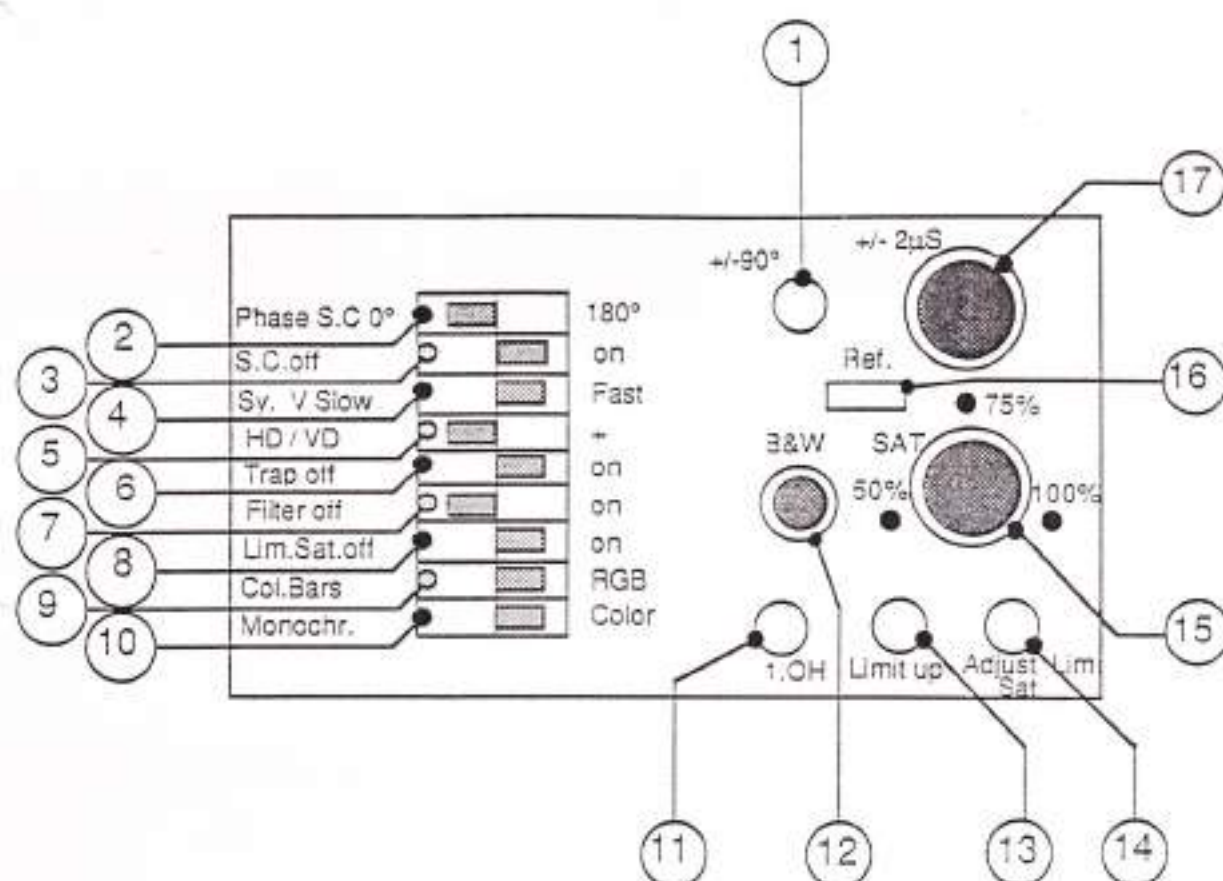
Fig. 1   Front panel

1. Adjustment of the sub-carrying phase +/-90°
2. Rotation through 0 or 180° of the sub-carrying phase
3. Cutting of the sub-carrier
4. Selection mode for the coupling of the synchro RASTER
5. Selection of the polarity of the synchro signals HD and VD
6. Switching on the sub-carrier rejector filter
7. Switching on the band cutting filter
8. Switching on the the saturation limitator
9. Selection of the bar color mode or R.G.B
10. Black and white function lock
11. Adjusting of the VCO's central frequency
12. Black and white function code
13. Presetting of the upper clipping limit on the R.G and B
14. Presetting of the upper,saturation limitator ceiling
15. Linear adjusting of the saturation level
16. Warning light signalling the presence of a synchronization signal
17. Presetting of the horizontal phase

NOTE: On delivery the Dip Switches will be, as shown above
(see diagram).This is a standard set up,though other combinations
are possible.

3.

Figure 2

1° HD and VD (horizontal and vertical drive) synchronization impulsions with positive or negative polarity, commanded by the lever (5), on the front side, and destined to drive certain types of cameras (especially black and white). These signals are available on the BNC plug numbers 16 and 15, in that order, and with a 4 volts/75 ohms level.

2° SBU (unique base signal) is a composite signal corresponding exactly to a white picture. This signal therefore includes implicitly the mixed synchro H and V and the mixed blanking H and V. These signals are distributed on the B.N.C. plug numbers 12 and 13, with a 1 volt/75 ohms level (Fig. 2).

3° You are in bar color, if the front face lever (9) is on the COLBARS position. This color is available in R.V.B. on the B.N.C. plugs (5) (6) and (7) with a 0.7 volts/75 ohms level and in coded form on the B.N.C. plug numbers (17) and (18) with 1 volt / 75 ohms nominal level. However, the coded signal is really complete, only if the lever (3) on the front face is "on" (color sub-carrier). The white test card is also distributed in R.G.B. + Synchro on the "peritelevision" plug, with a level of 1 volt/75 ohms followed by "slow commutation" information, 10 volts / 10 k.ohms and "rapid commutation", 1 volt/75 ohms (Fig. 2).

A synchronization signal is also available in this case, on the B.N.C. plug number (8) SBU 1 Volt/ 75 ohms.

To code a picture coming from the outside, join up the R.G. and B. components to the B.N.C. plug numbers (1), (2), and (3), and also join up the synchro with the B.N.C. plug number (4). We then have on the plug B.N.C. number (8), the black and white version of this picture whatever other manipulations are made, and this with a 1 volt/75 ohms level. If we place the lever (9) in the R.G.B. position, the picture will be found in R.G.B. on the B.N.C. plugs, (5) (6) and (7) with a 0.7 volts / 75 ohms level as well on the "Peritel" plug number (14) with a (1) volt / 75 ohms niscan.
These exits give the image of the whole video treatment operation, excluding of course the actual coding itself.
The coded picture is then available on the plugs B.N.C. numbers (17) and (18) with a 1 volt / 75 ohms level.

It is possible to synchronize the coder as from the RVB source, and vice versa. During autonomus work (Coder + Silver), it is advisable to use the coder as the video source, for it guarantees the real phased relation between the sub-carrier and the sweeper. In the control room, the RGB (Silver) source can be driven by the general studio synchronization system, as well as the coder.

The coder has controls for adjusting the phase, which have to be regulated before mixing or recording.
Button number (17) allows to adjust the coder's horizontal phase by +/- 2 microns in relation to the original synchronization. The correct adjustment is the one, which allows superimposition of the sources synchronization time with the one delivered by the coder.

This comparative measure is to be undertaken on the control room entry, in between the reference source and the coder or, on the control room exit, by commuting in between the reference and the coder. Adjust number (17) until perfect coincidence is reached between the descending synchronization reference front and the coders.
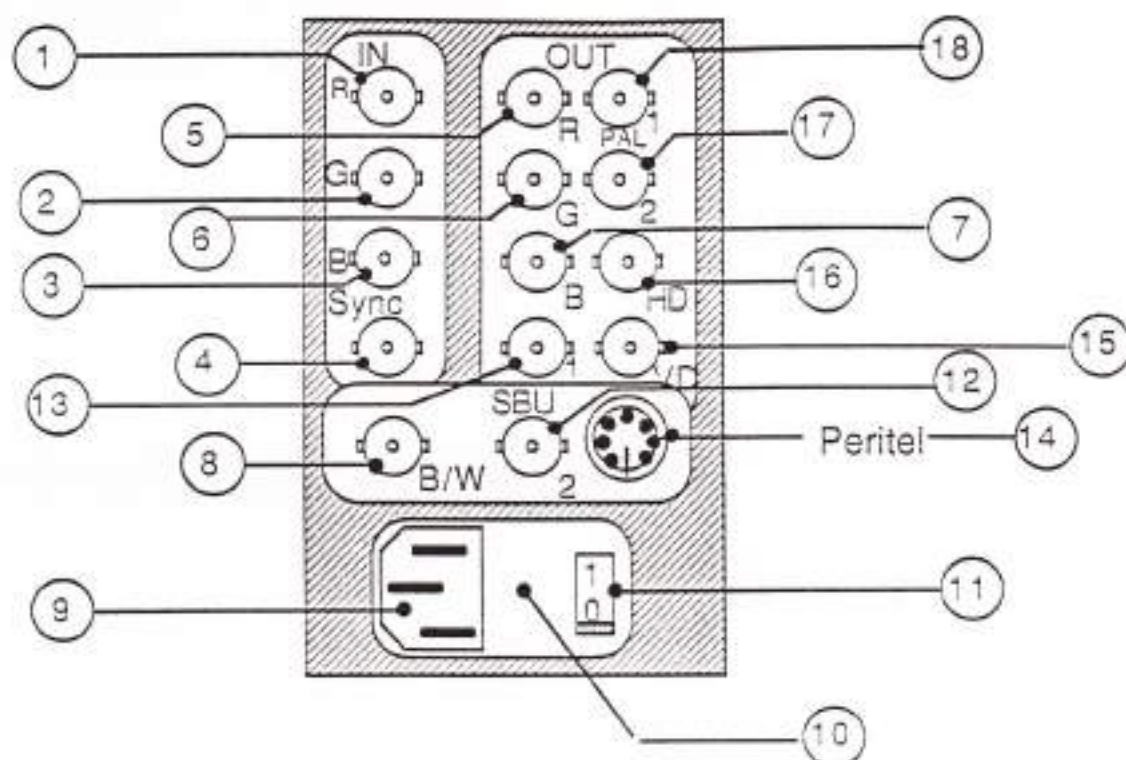
Fig 2.   Back panel

1. Red signal input 0,7 v / 75Ω
2. Green signal input 0,7v / 75Ω
3. Blue signal input   0,7v / 75Ω
4. Synchronization Signal Composite 1v / 75Ω (or black burst nominal)
5. Red signal exit 0,7v / 75Ω
6. Green signal exit 0,7v / 75Ω
7. Blue signal exit   0,7v / 75Ω
8. Black and white signal exit,representative of RGB input signals .
    Composite 1V / 75Ω. Allows a permanent control in Black & White,
    on B & W or Color monitor .
9. 220 Volts mains input.
10. Fuse carrier. 1A / 250V / 20x 5 / Fast
11. On / Off switch
12. SBU,white picture exit 1V / 75Ω
13. SBU,white picture exit   1V / 75Ω
14. Peritelevision plug.(see block diagram).
15. Vertical synchronization exit (HD) +4V or -4V / 75Ω
16.Horizontal synchronization exit (HD) +4V or -4V / 75Ω
17. Coded exit N° 2 1V / 75Ω
18. Coded exit N° 1   1V / 75Ω

6.

TECHNICAL SPECIFICATIONS

Power requirements:

220 volts   35 VA

Inputs:

RGB BNC's	0,7 volts/75 ohms
Composite sync	- 0,3 volts + 0,7 volts/75 ohms
Black Burst	- 0,3 volts/75 ohms

Outputs:

RGB BNC's	0,7 volts/75 ohms
RGB DIN	1 volt/75 ohms
Fast Switching	1volt/75 ohms
Slow switching	12 volts/10 K.ohms
Encoded 1	1 volt/75 ohms
Encoded 2	1volt/75 ohms
Band width RGB or encoded	without filter ≥ 6 Mhz at - 3db with filter ≥ (see specification page 2)
SBU (unique base signal) sync	1volt/75 ohms
HD and VD (horizontal and vertical drive)	- 4 volts or + 4 volts/75 ohms
S/B	≥ 45 dB

PAL ENCODER - Synoptic

RGB IN

Sync
B
G
R

SATURATION CONTROLLER

RGB with
dynamic saturation
control (for broadcast
quality encoding)

R
G
B

Sync
B
G
R

ENCODER

Horizontal drive sync
Vertical drive sync
SBU sync

PAL composite outputs (3/4" quality)

Black & white composite output

ENCODER

Special US monitor lead

Foot switching (Pedal - Europe)
Slow switching (Pedal - Europe)
Not used
GROUND
Synchro
Red
Green
Blue

0.7 V USA or
1 V Europe (Pedal)

ENCODER Monitor socket (female) - viewed from exterior
(same pin connections as for the SILVER and the FADEC)

R
G
B
Synchro

SILVER

EXTENSION

FADEC

PAL CODER

VIDEO INPUT
(Camera, VCR etc.)

B & W composite output

Sync In Base Output (white picture)

Monitor

Vertical Drive sync signal

Horizontal Drive sync signal

PAL Composite outputs

Sync Out Base Output (white picture)

RGB
Intensity descramsler

ALWAYS CONNECT ALL UNITS TO
THE MAINS POWER SUPPLY BEFORE
SWITCHING THE POWER ON.

YOU MUST SWITCH ON THE EXTENSION
BEFORE YOU SWITCH ON THE SILVER
OR : USE THE SWITCH ON THE SOCKET
BOARD TO SWITCH UNITS ON OR OFF.

Connecting the FADEC and the PAL ENCODER for recording to a Video Cassette Recorder WITH video inlay

SILVER

DE GRAFF
SILVER IV

FADEC

PAL CODER

VIDEO OUTPUT
(from camera)

Sync

Possible connections:

RGB with dynamic saturation control
For broadcast-quality encoding

Sync Broadcast - Black burst.

2 Modes Possible:
The above connections in
PAL.
Connections in HD / VD

Master

B & W composite output

Source :SILVER , FADEC etc.
For recording of digitized
images only, or camera
driven by this coder

Enables Black and White
digitizing with the camera

PAL OUTPUT available

PAL ENCODER produces a
sub-carrier interlacing.
(as with the ALCATEL
generation of encoders.)

SILVER

DE GRAFT
SILVER IV

FADEC

PAL CODER

VIDEO OUTPUT
(from Camera, VCR etc)

RGB with dynamic saturation control
For broadcast quality encoding

Sync. out (copy of Sync. IN)

B & W composite output

Synchro Base Unique (white picture)

Vertical Drive sync signal

Horizontal Drive sync signal

Monitor

Source: Video Recorder or Camera
PAL   or SECAM.

For Black and White digitizing
(leaving one PAL output free)

MASTER SYNC.

VIDEO MIXING CONSOLE

SILVER

DE GRAFF
SILVER IV

FADEC

PAL CODER

TIMEBASE
CORRECTOR

Sync

Black Burst
or Coded Signal

RGB with dynamic saturation control
For broadcast quality encoding

Sync-out (copy of Sync IN)

Encoded

Horizontal Drive sync signal

Vertical Drive sync signal

B & W composite output

Synchro Base Unique (white picture)

Monitor

VIDEO SOURCE + TIMEBASE
CORRECTOR IN STUDIO ENVIRONMENT.
Permits B&W / COLOR digitizing with PAL
output in phase with the mixing console.

PROJECT 1
User manual

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

PROJECT 1   (DG-PJ1)

PROJECT 1 is an application designed essentially for communication... for the presentation of ideas in the form of an animated sequence, making full use of the graphic potential of the SILVER system.

Sequences are created directly, using functions from the whole range of SILVER applications, and are subsequently executed automatically as many times as required. You can save recorded sequences to floppy disk (in the MEMORY EXTENSION/DISK) or hard disk (via the PC/AT LINK). A comprehensive range of editing functions is offered, and sequences can be inserted, merged, looped etc... A chaining option is also available to hard disk users for multiple sequence presentations.

NEW REC	Record a new sequence	TEST	Play through once
STOP REC	Stop recording	PLAY	Play in continuous cycle
CONT REC	Record follow-on to sequence	CONT PLAY	Continue after interrupt
	Kill sequence		Initialise PROJECT 1

PAUSE Pause (frames, time, indefinite)... 🎞 ⏱ 〰

LIST Acess to sequence listing plus insertion, deletion, testing etc...

	Save to hard disk		Save to floppy disk
	Load from hard disk		Load from floppy disk
	Delete from hard disk		Delete from floppy disk
	Select drive on PC/AT LINK		View screen

Demonstration disk

Certain application cartridges are accompanied by a demonstration disk. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

PROJECT Click the PROJECT icon at the top of the menu.

LOAD Click the LOAD icon.

overwrite (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 introduction

Chapter 2 guided tour

Chapter 3 quick reference section

Chapter 1 - introduction

About PROJECT 1

PROJECT 1 is an application designed essentially for communication... for the presentation of ideas in the form of an animated sequence, making full use of the graphic potential of the SILVER system.

Sequences are created directly, using functions from the whole range of SILVER applications, and are subsequently executed automatically as many times as required. The general procedure is as follows :

- Call the PROJECT 1 application.

- Select RECORDING MODE ON.

- You can now call GRAF 65000, LOGOTEXT 1, BUSINESS 1 etc... in fact any of the SILVER applications.

- As you use the functions, they are automatically recorded into the memory of the SILVER.

- Call PROJECT 1 once more.

- Select RECORDING MODE OFF.

- Replay the sequence, once through, or in continuous cycle.

- You can save recorded sequences to floppy disk (in the MEMORY EXTENSION/DISK) or hard disk (via the PC/AT LINK).

- Sequences can be listed and modified. You can merge sequences, insert or delete functions, create loops, chain sequences etc...

In order to use PROJECT 1, you will require a system incorporating a memory extension of at least 1 megabyte (the MEMORY EXTENSION/ DISK DG-150 or the MEMORY EXTENSION 2 DG-155).

If you wish to save sequences to floppy disk you will require the MEMORY EXTENSION/DISK. To save sequences to the hard disk of a PC or AT you will require the PC/AT LINK (DG-140/145).

Note that some functions are not sequencable... these are functions for which there would be no particular interest in their inclusion in an animated sequence (saving character fonts to disk for instance). In the event of such a function being called, a message will inform you that it is non-sequencable.

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

   ie : CONT PLAY   YES

2. Icons exclusive to the manual (depicting a physical action)

   ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

	Click the tip of the pen on the tablet (then release).
	Press the button on the barrel of the pen.
	Click the tip of the pen on the tablet WITHOUT releasing.
	Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :
	Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).
	This indicates that you should type something on the SILVER's keyboard.

Chapter 2 - guided tour

Setting RECORD mode to ON

Click the PROJECT icon at the top of the SILVER menu. The PROJECT 1 functions are displayed as blue icons. A message is displayed at the base of the screen...

```
W E L C O M E
Credit 0
```

Click the NEW RECORD icon... record mode is now ON. A message appears...

```
Record from start
Credit 200000
```

'Credit' indicates the memory free for recording a sequence.

Any functions subsequently called from external SILVER applications will be recorded into memory as they are performed.
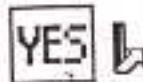
Click the GRAF 65000 icon at the top of the menu. The DRAWING type functions are already selected.

We will start the sequence by clearing the screen.

Click YES... the screen clears with the current background color.

Click the FREEHAND function. Exit from the menu and draw some lines on the screen (in different colors).

Call the menu and select GEOMETRIC type functions.

Click the CIRCLES function. Exit from the menu and draw some circles of different sizes and different colors.

Stopping the recording

Call the menu and click the PROJECT icon at the top of the screen. The PROJECT 1 functions are displayed as blue icons. A message appears...

```
Recording mode on
Credit 198446
```

Click the STOP RECORD icon... record mode is now OFF. A message appears...

```
Record end
Credit 198446
```

Testing the sequence

Click the TEST icon... the menu disappears and the sequence runs through once. The menu returns.

```
End of sequence
Credit 198446
```

Adding to the sequence

Click the CONTINUE RECORD icon... record mode is ON once more... any new functions recorded will follow on from the sequence already recorded.

```
Continue recording
Credit 198446
```

Click the GRAF 65000 icon at the top of the menu. The DRAWING type functions are already selected.

Select GEOMETRIC type functions.

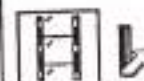Click the STRAIGHT LINES icon... exit from the menu and draw one or two lines (all the same color).

Inserting a pause

Call the menu and select MISCELLANEOUS functions... within this group you will see the PAUSE icon.

Click the PAUSE icon... the three PAUSE options are displayed at the base of the menu...

Click the icon to the left of this group. This inserts a pause into the sequence based on a set number of screen frames (one frame = 1/25th second in europe or 1/30th second in USA).

Type the number of frames for which you want the sequence to pause (eg : 125 gives a pause of 5 secs)...

... and press RETURN.

...some more lines

Select GEOMETRIC type functions.

Click the STRAIGHT LINES icon... draw one or two more lines (using another color this time).

...another pause

Call the menu and select MISCELLANEOUS functions... within this group you will see the PAUSE icon.

Click the PAUSE icon... the three PAUSE options are displayed at the base of the menu...

Click the middle icon of this group. This inserts a pause into the sequence based on tenths of a second.

Type the number of 10ths of a second for which you want the sequence to pause...
(eg : 80 gives a pause of 8 seconds)...

... and press RETURN.

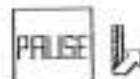### ...some more lines

Select GEOMETRIC type functions.

Click the STRAIGHT LINES icon... draw one or two more lines (using another color this time).

...another pause

Call the menu and select MISCELLANEOUS functions... within this group you will see the PAUSE icon.

Click the PAUSE icon... the three PAUSE options are displayed at the base of the menu...
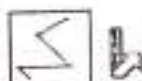
Click the icon to the right of this group. This inserts a pause of indefinite length into the sequence (when the replayed, the sequence will pause and will not continue until the pen is clicked on the tablet).

...some more lines

Select GEOMETRIC type functions.

Click the STRAIGHT LINES icon... draw one or two more lines (using another color again).

Stopping the recording

Call the menu and click the PROJECT icon at the top of the screen. The PROJECT 1 functions are displayed as blue icons. A message appears...

> Recording mode on
> Credit 197301

Click the STOP RECORD icon... record mode is now OFF. A message appears...

> Record end
> Credit 197301

Testing the sequence

Click the TEST icon... the menu disappears and the sequence begins to play...

...the screen is cleared followed by some FREEHAND drawing and some CIRCLES. This is followed by some straight LINES... then the sequence PAUSEs (for 5 seconds)... some more LINES appear... then another PAUSE (8 seconds)... then some more LINES. The sequence then PAUSEs a third time...

pause until pen clicked
5 secs
8 secs

...click the pen on the tablet to resume the sequence... the rest of the LINES appear... at the end of the sequence the menu returns.

> End of sequence
> Credit 197301

LISTing the sequence

Click the LIST icon... the menu disappears a listing of all the functions recorded is displayed.

☛ 1	CLEAR SCREEN
2	FREEHAND
3	CIRCLE
4	STRAIGHT LINE
5	PAUSE
6	STRAIGHT LINE
7	PAUSE
8	STRAIGHT LINE
9	PAUSE
10	STRAIGHT LINE

LNUP LNDN PGUP PGDN BEG END
DELETE MARKER INSERT TEST-UP-TO

Deleting a function from the listing

At the base of the screen are displayed the editing commands that are available. Position the cursor over DELETE and click the pen on the tablet.

The word DELETE and the cursor are now displayed in magenta. Move the pen over the listing... as each function is passed over the line number is also displayed in magenta.

|	
9 PAU	Position the cursor so that the number 9 is displayed magenta... click the pen on the tablet... ...line 9 (the third PAUSE) is deleted from the listing.
7 PAU	Similarly, click line number 7... ...line 7 (the second PAUSE) is deleted from the listing.
5 PAU	Similarly, click line number 5... ...line 5 (the first PAUSE) is deleted from the listing.
	There are now only 7 lines of functions in the listing... note that as each function is deleted the line numbers are automatically adjusted accordingly.
	Click at the BASE of the tablet... the word DELETE is no longer displayed in magenta.
	Click at the BASE of the tablet a second time... ... the menu returns.
TEST	Click the TEST icon... the sequence runs through, but this time there are no longer any pauses inbetween the drawing of the straight lines.

Saving the sequence to disk

SAVE	Ensure that there is a prepared disk present in the MEMORY EXTENSION/DISK unit... ...then click the SAVE icon.

Name of the sequence :

	Type a name for the sequence file to be saved on disk (16 characters maximum).
	Press RETURN. When the sequence has been saved on disk a message appears...

(sequence name) is saved
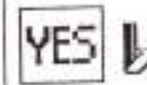
Recording a new sequence

NEW REC	Click the NEW RECORD icon...

Sequence already in memory !
Overwrite ?

YES	Click YES... the old sequence is erased and recording mode is now ON.

Record from start
Credit 200000

GRAF 65000	Click the GRAF 65000 icon at the top of the menu. The DRAWING type functions are already selected.
	Click the COLOR FUNCTIONS icon.
	Click the GRADATED BACKGROUND icon...

Select top color

Select bottom color

	Select the colors as requested... the screen is cleared with a gradation between the two colors.
	Click the DRAWING type functions icon.
	Click the AIRBRUSH icon.
	Click the INTENSITY icon... and choose the greatest of the three strengths proposed... then exit from the menu and draw with the AIRBRUSH (using different colors).

Call the menu and click the SMEARING BRUSH icon. Exit from the menu and use the brush to smear the colors around on the screen.

Stopping the recording

Call the menu and click the PROJECT icon at the top of the screen. The PROJECT 1 functions are displayed as blue icons. A message appears...

> Recording mode on
> Credit 168805

Click the STOP RECORD icon... record mode is now OFF. A message appears...

> Record end
> Credit 168805

Testing the sequence

Click the TEST icon... the menu disappears and the sequence plays from beginning to end.

> End of sequence
> Credit 168805

Loading a sequence from disk

Click the LOAD icon... since there is a sequence already in memory a message appears...

> Sequence already in memory
> LOAD overwrite
> LOAD follow-on

Since we want the sequence stored on disk to follow on from the sequence already in memory (merge the two sequences), position the cursor over 'LOAD follow-on' and click the pen.

The menu disappears and a list of the sequences stored on disk appears...

> Select sequence to load

Move the pen to position the red bar over the sequence you want to load (here we want to load the sequence saved previously)... click the pen...

...the menu returns...

> Repeat how many times ? :

Here you are given the option of loading the sequence on disk as a loop so that when it executes that section will repeat a specified number of times...

Note that this option is only available if there are no loops already in the sequence on disk that has been selected for loading.

Here we want the sequence to loop TWICE so type the number 2 on the keyboard...

... and press RETURN.

The sequence loads from disk...

> Recording mode off
> Credit 166197
> (sequence name) is loaded

Click the TEST icon... the sequence plays through... note that the 'follow-on' part of the sequence (that you just loaded) plays through twice.

| LIST ⬇ | Click the LIST icon... |

▼ 1	GRADATED BACKGROUND	⎫
2	AIRBRUSH	⎬ already in memory
3	SMEARING BRUSH	⎭
4	LOOP BEGIN	⎫
5	CLEAR SCREEN	
6	FREEHAND	
7	CIRCLE	
8	STRAIGHT LINE	⎬ loaded from disk
9	STRAIGHT LINE	
10	STRAIGHT LINE	
11	STRAIGHT LINE	
12	LOOP END	⎭

The marker

The marker is used to mark the position (between two lines of the listing) where you wish to TEST-UP-TO or INSERT (see below)

Testing part of a sequence

While still in LIST mode, click the MARKER command at the bottom of the screen. Move the cursor over the listing... a triangular marker moves up and down (to the left of the line numbers).

MARKE ⬇

▶ 6
7 ⬇

Position the marker between lines 6 (FREEHAND) and 7 (CIRCLE) then click the pen... the marker is now fixed in position.

TEST-U ⬇

Click the TEST-UP-TO command at the base of the screen... the listing disappears and the sequence is played up to the marked position (line 6 - FREEHAND)...

The menu returns...

> End of sequence
> Credit 166197

LIST ⬇

Note that if the marker is in the middle of a LOOP, that LOOP will be ignored if TEST-UP-TO is used.

Click LIST... the marker is still in the same position (between lines 6 and 7).

Inserting functions into the sequence

It is possible to record new functions in the middle of a sequence already in memory. While in LIST mode, click the MARKER command at the bottom of the screen.

MARKE ⬇

▶ 9
10 ⬇

Position the marker between lines 9 and 10 of the listing (this is where we will insert the new functions) and click the pen... the marker is now fixed in position.

INSERT ⬇

Click the INSERT command... the menu returns.

> Insert mode
> Credit 166197

You are now ready to record the functions to be inserted into the sequence.

GRAF 65000

Click the GRAF 65000 icon at the top of the menu. The DRAWING type functions are already selected.

⬇

Select GEOMETRIC type functions.

⬇

Click the RECTANGLES icon... exit from the menu and draw some concentric rectangles at the centre of the screen.

PROJECT

Call the menu and click the PROJECT icon at the top of the screen. The PROJECT 1 functions are displayed...

> Recording mode off
> Credit 154586

TEST

Click the TEST icon to view the sequence. You will notice that the new functions have been recorded at the insert point that you marked (in the middle of the STRAIGHT LINES).

LIST

When the sequence has played through click the LIST icon... (note that the marker is still in the same position).

```
 1    GRADATED BACKGROUND
 2    AIRBRUSH
 3    SMEARING BRUSH
 4    LOOP BEGIN
 5    CLEAR SCREEN
 6    FREEHAND
 7    CIRCLE
 8    STRAIGHT LINE
 9    STRAIGHT LINE
►10    RECTANGLE              inserted function
11    STRAIGHT LINE
12    STRAIGHT LINE
13    LOOP END
```

Playing the sequence in continuous cycle

PLAY

Click the PLAY icon... the sequence plays from beginning to end (including loops), then starts again from the beginning.

The sequence can be temporarily halted by clicking the pen in the centre of the tablet...

... and resumed by clicking a second time...

... OR you can call the menu by clicking at the BASE of the tablet.

CONT PLAY

Click the CONTINUE PLAY icon to resume the sequence from the point at which it was interrupted.

Chaining sequences (for hard disk users only)

Chaining is a technique whereby an instruction at the end of the sequence listing (CHAIN SEQUENCE) loads and executes another sequence (already saved on the hard disk).

This technique enables the creation of multiple sequence presentations making full use of the large storage capacity and fast access times of hard disks via the PC/AT LINK (DG-140/145).

First we will save the sequence we have just created to hard disk... (this will be the third sequence in the chain).

SAVE

Click the HARD DISK SAVE icon...

Name of the sequence :

Type the name on the keyboard (8 characters max.)... ...call the sequence **SEQ3** (it will be 3rd in the chain).

... then press RETURN. When the sequence has been saved on the hard disk a message appears...
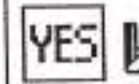
SEQ3 is saved

Now we must create the sequence that will chain (load and execute) SEQ3... (ie : SEQ2).

NEW REC

Click the NEW RECORD icon...

Sequence already in memory !
Overwrite ?

YES

Click YES... the old sequence is erased and recording mode is now ON.
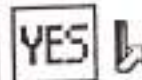
Record from start
Credit 200000

Click the GRAF 65000 icon at the top of the menu. The DRAWING type functions are already selected.

We will start the sequence by clearing the screen.

Click YES... the screen clears with the current background color.

Click the FREEHAND function... then exit from the menu and write (freehand) in large letters : *Sequence 2*

Call the menu and click the PROJECT icon at the top of the screen. A message appears...

> Recording mode on
> Credit 190720

Click the HARD DISK LOAD icon (to indicate that this is the point in the sequence where you wish to load and execute another sequence).
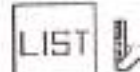
A message appears...

> Name of sequence
> to be chained :

Type **SEQ3** on the keyboard...

... then press RETURN... a message appears...

> Recording mode off
> Credit 190671

The CHAIN SEQUENCE instruction and the name of the sequence to be chained have been memorized... (and recording mode is set to OFF).

Click the LIST icon...

> ▼ 1   CLEAR SCREEN
>   2   FREEHAND
>   3   CHAIN SEQUENCE

We will save this sequence to hard disk...

Call the menu and click the HARD DISK SAVE icon...

> Name of the sequence :

Type the name on the keyboard (8 characters max.)... ...call the sequence **SEQ2** (it will be 2nd in the chain).

... then press RETURN. When the sequence has been saved on the hard disk a message appears...

> SEQ2 is saved

Now we must create the sequence that will chain (load and execute) SEQ2... (ie : SEQ1).

Click the NEW RECORD icon...

> Sequence already in memory !
> Overwrite ?

Click YES... the old sequence is erased and recording mode is now ON.

> Record from start
> Credit 200000

Click the GRAF 65000 icon at the top of the menu.
The DRAWING type functions are already selected.

We will start the sequence by clearing the screen.

Click YES... the screen clears with the current background color.

Click the FREEHAND function... then exit from the menu and write (freehand) in large letters : *Sequence 1*

Call the menu and click the PROJECT icon at the top of the screen. A message appears...

Recording mode on
Credit 190712

Click the HARD DISK LOAD icon (to indicate that this is the point in the sequence where you wish to load and execute another sequence).
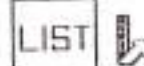
A message appears...

Name of sequence
to be chained :

Type SEQ2 on the keyboard...

... then press RETURN... a message appears...

Recording mode off
Credit 190663

The CHAIN SEQUENCE instruction and the name of the sequence to be chained have been memorized... (and recording mode is set to OFF).

Click the LIST icon...

1 CLEAR SCREEN
2 FREEHAND
3 CHAIN SEQUENCE

We will save this sequence to hard disk...

Call the menu and click the HARD DISK SAVE icon...

Name of the sequence :

Type the name on the keyboard (8 characters max.)...
...call the sequence SEQ1 (it will be 1st in the chain).

... then press RETURN. When the sequence has been saved on the hard disk a message appears...

SEQ1 is saved

Executing the chain of sequences

Click the TEST icon...

The sequence in memory (SEQ1) is executed
(CLEAR SCREEN, FREEHAND)

...then the second sequence (SEQ2) is loaded from hard disk and executed (CLEAR SCREEN, FREEHAND)

...finally the third sequence is loaded and executed.

Some important advice

⊡ UNDO

When NEW RECORD is selected, the UNDO function from GRAF 65000 is automatically disabled. This is in order to avoid a pause of around one second (the time taken to store an image) between different functions when the sequence is replayed. It is possible to validate the UNDO from within RECORD mode but this should be done only if absolutely necessary, and should be disabled as soon as it is no longer required (unless of course this one second pause is desirable in your sequence).
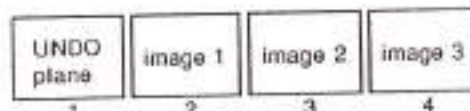
⊡ Kill UNDO

The time taken to KILL the UNDO plane (free the memory it occupies) is identical during RECORDING mode and during PLAY mode. The time taken will depend upon the plane's position in memory (see below).

⊡ Delete memory plane

The time taken to KILL one of the memory planes (free the memory it occupies) is identical during RECORDING mode and during PLAY mode. The time taken will depend upon the plane's position in memory. The first image saved to a memory plane will occupy position 1, the second will occupy position 2, etc... If at this stage UNDO is enabled, the UNDO plane will occupy position 3. A third image saved to memory will occupy position 4, and so on. Deleting memory plane 1 would require much longer to execute than deleting plane 4 since the other three planes would all need to be shifted up in memory to occupy the space liberated.

Example 1 :
In this example UNDO is ON and three images have subsequently been stored in memory planes. The time

UNDO plane	image 1	image 2	image 3
1	2	3	4

taken to delete image 3 would be negligible, but deleting the UNDO plane (KILL UNDO) would require several seconds.

Example 2 :
In this example UNDO has been validated LAST (after 3 images have been stored in memory planes. The time

image 1	image 2	image 3	UNDO plane
1	2	3	4

taken to delete the UNDO plane (KILL UNDO) would be negligible, but deleting image 1 would require several seconds.

⊡ Delete line from listing

You must TAKE GREAT CARE WHEN EDITING A LISTING since deleting one function can have serious consequences for the rest of the sequence.

Example :
1	CLEAR SCREEN
2	CIRCLE
3	FILL AREA

After clearing the screen, a circle is drawn and its interior filled with color. If the second line of the listing (CIRCLE) is subsequently deleted, when the sequence is played the WHOLE SCREEN will be flooded when the FILL AREA function executes.

⊡ Loops

When sequences are loaded from disk (as follow-on or to overwrite the current sequence), a loop option is offered (provided no loops exist already on the disk sequence).

Once the sequence is loaded the LOOP BEGIN and LOOP END are indicated within the listing. You can load several loop sequences into the same main sequence (and of course the main sequence will loop from beginning to end if you use the PLAY function). When deleting a loop from the sequence you should delete both the LOOP BEGIN instruction and the LOOP END instruction.

⊡ Setting RECORD mode to OFF

After recording a sequence (or an insert), you can set RECORD to OFF by clicking the STOP RECORD icon. You can equally stop the recording by clicking directly LIST, PLAY, TEST, or one of the DISK icons from the PROJECT menu. In each of these cases record will be set to OFF and the respective function will be executed. Note that when INSERTing functions, on return to PROJECT 1 the recording mode is automatically set to OFF.

▶ The MARKER

If you have recorded a very long sequence and wish to locate an function instruction in the middle of the listing, use the TEST function to play the sequence back, interrupt the sequence during the function in which you are interested, and call the menu... then use the LIST function ... the marker will be positioned just below the function you interrupted.

LIST Inserting

It is good practice when inserting new functions into a sequence listing, to position the MARKER and use the TEST-UP-TO command before starting to INSERT.

Alternatively, use the TEST (or PLAY) function, and interrupt the sequence at the desired INSERT point. This procedure will automatically position the MARKER ready for the insertion.

Chaining sequences (hard disk users only)

The chaining command is set by clicking the HARD DISK LOAD icon when in RECORD MODE... After inputting the disk sequence to be chained recording mode is automatically set to OFF... this means that CHAIN SEQUENCE is the LAST instruction in the sequence listing. It is possible to use the CONTinue RECording icon to add new functions to the sequence (AFTER the CHAIN SEQUENCE instruction)... However, when the sequence is played those new functions will NEVER be executed since the CHAIN SEQUENCE instruction will load and execute the disk sequence (erasing the current sequence in the process).

Note that if you wish to view a series of chained sequences the TEST (once through) function should be used rather than PLAY (continuous) since continuous play would only apply to the very last sequence loaded in the chain. If you require a chain that will play continuously (in its entirety) then the LAST sequence should contain a CHAIN instruction to load and execute the FIRST sequence.

Saving to hard disk

It should be noted when inputting a name for a sequence to be saved to hard disk, that only the first 8 characters of the name are recognized. This means that if (for example) you save a sequence that you have called SEQUENCE1 (containing 9 characters) the computer will only use the first 8 characters. Subsequently if you save a second sequence called SEQUENCE2... as far as the computer is concerned they both have the same name ("SEQUENCE").

The hard disk will happily overwrite a previously saved sequence of the same name without any warning... so in the case above, saving the second sequence would destroy the first sequence. This is why you should take great care when naming sequences to be saved to the hard disk.

Chapter 3 - quick reference section

Quick reference section

Chain sequence	This option is available to hard disk users only PC/AT LINK (DG 140/145). Chaining is a technique whereby an instruction at the end of the sequence listing (CHAIN SEQUENCE) loads and executes another sequence (already saved on hard disk). The CHAIN SEQUENCE instruction is enabled by clicking the HARD DISK SAVE icon when record mode is ON... the name of the disk sequence to be chained is then requested and record mode is set to OFF.
Continue play	After a sequence in PLAY or TEST has been halted by clicking at the BASE of the tablet, this function will resume the sequence from the position at which it was halted. CONTINUE PLAY can only work if no other function has been selected in the meantime.
Continue record	This function sets PROJECT into RECORD mode, whereby the recording will follow on from the end of any previously recorded sequence already in memory.
Delete file (from disk)	The DELETE function will delete a file from floppy disk in the MEMORY EXTENSION/DISK unit.
Hard disk (delete)	Deletes a file from the hard disk of a PC/AT or compatible (connected to the SILVER via the PC/AT LINK).
Hard disk (load sequence)	This function is used to LOAD a recorded PROJECT 1 sequence from the hard disk of a PC/AT or compatible connected to the SILVER via the PC/AT LINK (either overwriting the sequence in memory or loading an appendage to the current sequence). A 'loop' option is available (to loop the loaded sequence a set number of times).
Hard disk (save sequence)	The SAVE function is used to SAVE the current PROJECT 1 sequence to the hard disk of a PC/AT or compatible (connected to the SILVER via the PC/AT LINK).
Hard disk (select drive)	Selects a disk drive (A to F) for use by the PC/AT LINK for saving PROJECT 1 sequences to PC/AT disk (hard or floppy).
Insert	The INSERT command (found within the LIST function) permits the recording of functions at a specified point in the middle of a sequence already in memory.
Kill	Any recorded sequence currently in memory can be erased by clicking this icon.

List	This function gives a listing of the recorded sequence in memory. Various editing commands are available in list mode.... LNUP/LNDN (line up/down) : scroll listing up/down one line PGUP/PGDN (page up/down) : scroll listing up/down 10 lines BEG/END (beginning/end) : display beginning/end of listing DELETE : delete a line from the sequence MARKER : mark position for insert etc. INSERT : insert functions into sequence TEST-UP-TO : test up to marker position
Load sequence (from disk)	The LOAD function is used to LOAD a recorded PROJECT 1 sequence from a floppy disk in the MEMORY EXTENSION/DISK (either overwriting the sequence in memory or loading an appendage to the current sequence). On selecting a sequence for loading, a 'loop' option is available (to loop the loaded sequence a set number of times).
Marker	When in LIST mode the MARKER command is used to place a triangular marker between two lines of the listing to mark the position for the INSERT command or for the TEST-UP-TO command. In addition, during the PLAY or TEST functions, if the sequence is interrupted before the end and the menu is called, on subsequent use of the LIST function the marker will be positioned just below the point in the listing where the sequence was aborted. Note that by default the marker is positioned just above the first line of the listing.
New record	Clears any already recorded sequence from memory and sets PROJECT 1 into record mode.
Pause	This function can be found in the MISCELLANEOUS function type of GRAF 65000 and other applications as well as within PROJECT 1. It inserts a PAUSE into the sequence in the process of being recorded. On clicking the icon, three types of pause are proposed...
Pause (n frames)	This option inserts a pause of n frames into the sequence being recorded. The number of frames (the time taken to display one screen image... 1/25th second in europe / 1/30th second in US) can be specified.
Pause (n x 1/10sec)	This option inserts a pause of n tenths of a second into the sequence being recorded. If therefore you required a pause of 15 seconds when the sequence plays, you should input a value of 150 at this stage.
Pause (until click)	This option inserts an indefinite pause into the sequence being recorded. When the sequence plays, it will pause at this point and will not continue until the pen is clicked on the tablet.

Play	Executes the whole sequence in a continuous loop. The sequence can be temporarily halted by clicking the pen, and continued by clicking a second time.	PLAY
Restart	This function sets all PROJECT variables to their default values and clears any sequences that may be in memory. PROJECT reverts to its initial state.	
Save sequence (to disk)	The SAVE function is used to SAVE the current PROJECT 1 sequence to a floppy disk in the MEMORY EXTENSION/DISK.	SAVE
Stop record	A sequence in the process of being recorded can be stopped by clicking this icon.	STOP REC
Test	Executes the sequence ONCE only from start to finish. The sequence can be temporarily halted by clicking the pen, and continued by clicking a second time.	TEST
Test-up-to	This command appears in the menu of the LIST function. It permits the sequence to be played UP TO the point in the sequence listing indicated by the MARKER (see MARKER).	
View GRAF1 function	Clicking this icon temporarily removes the menu so that the underlying graphic image can be viewed. That this icon appears in all of the function groups for most SILVER applications.	

VIDEOFX 1
User manual

VIDEO FX

Congratulations on your decision to purchase this product.
The SILVER videographic workstation has been developed as the result of
five years of research into the needs of professionals in the field of videographic
creation and image treatment. The SILVER philosophy combines the latest
technology, a flexible approach and the highest standards of construction
to offer you a power and flexibility unrivalled at any price.

VIDEOFX 1 (DG-VD1)

VIDEO FX 1 is specially designed for professionals in the video creation field, and provides real time special effects that until now have only been available on more costly and less flexible systems.

Geometric effects

Compressed digitizing

Mosaic effect

Kaleidoscope effect

Clear screen

Video inlay on/off (not available in USA)

WIPE Wipes

SLIDE 13 slides (video 1 over video 2)

COLOR Color functions

Colorized digitizing effects (2 to 64 digitizing levels)

Selection of user definable palettes

Create palette gradations

Color cycling

Save palette to disk

Load palette from disk

Memory plane wipes ⓜ (requires MEMORY EXTENSION 1 or 2)

5 wipes
(memory image over current image)

Demonstration disk

Certain application cartridges are accompanied by a demonstration disk. Of course the MEMORY EXTENSION 1/DISK (DG-150) will be needed in order to load from the disk. Insert the disk into the disk drive.

The demonstration also requires the presence of LOGOTEXT 1 (DG-LO1) and PROJECT 1 (DG-PJ1). This demonstration is an animated sequence and is loaded as follows...

PROJECT — Click the PROJECT icon at the top of the menu.

LOAD — Click the LOAD icon.

overwrite — (If there is a sequence already in memory) click the "LOAD overwrite" option.

DEMO — When asked which sequence to load, position the cursor over "DEMO" and click the pen.

PLAY — Click the PLAY icon... the demonstration sequence will start to run.

For users who do not have LOGOTEXT 1 and PROJECT 1, an image (called "IMAGE") is included on the disk. Use this as a background or keep it for your personal image bank (a different image is supplied with each application cartridge). Load the image using GRAF 65000.

Sticker

A self-adhesive label is enclosed with this application. Peel off the backing strip and stick the label on the outside of the box. When the box is stored on a shelf, the application will be easily identifiable.

Contents

Chapter 1 - introduction

About VIDEOFX 1

 VIDEOFX is specially designed for professionals in the video creation field, and provides wipes, slides and special effects (mosaics, compressions, windows, etc...) that until now have only been available on more costly and less flexible systems.

These treatments can be performed on still or moving video images, as well as purely graphic images produced using GRAF 65000 or any other application in the SILVER system.

The ergonomics have been carefully researched to provide ease of use in a professional environment.

The following video treatments are provided...
Digitized compression
Mosaic
Slides
Kaleidoscope
Colorizing
Graphic wipes

What you will need

For the GRAPHIC (memory plane) WIPE functions
- SILVER (DG-100) plus MEMORY EXTENSION 1 or 2 (DG-150/155)
- Color monitor

For COLORIZED DIGITIZING
- ENCODER (DG-120)

For SLIDES and GEOMETRIC functions
- Video camera/VCR etc. with separate RGB outputs...
  OR composite video source plus decoder
- Second composite video source (Genlocked with 1st souce)
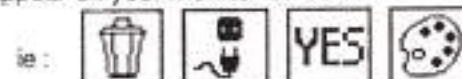- ENCODER (DG-120)
- FADEC (DG-110)

About the manual

The manual is divided in two main sections - a 'guided tour', together with some useful advice, and a 'quick reference' section (covering most of the VIDEOFX 1 functions in alphabetical order plus connection plans).

Using the manual

The column on the left hand side of each page gives information in the form of icons depicting an action required on the part of the user. These icons can generally be divided into two types...

1. Icons that appear on your monitor screen

   ie :

2. Icons exclusive to the manual (depicting a physical action)

   ie :

To the right of these icons, are textual descriptions and explanations for the procedures used. The meanings for each of the 'action' icons used in this manual are described below ...

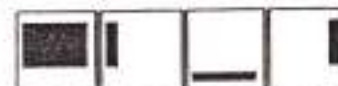|	
	Click the tip of the pen on the tablet (then release).
	Press the button on the barrel of the pen.
	Click the tip of the pen on the tablet WITHOUT releasing.
	Click the pen at the BASE of the tablet... (the part of the tablet where you should click will be shown as a shaded area within the icon)... ie :
	Click the pen with the cursor positioned over the icon shown (from the SILVER's menu).
	This indicates that you should type something on the SILVER's keyboard.

Chapter 2 - a guided tour

Click the VIDEOFX icon at the top of the menu... the four main function groups appear... GEOMETRIC functions, WIPES, COLORIZING and GRAPHIC WIPES.
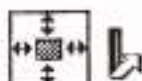
Compressed digitizing

Click the GEOMETRIC functions icon.
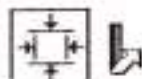
Click the COMPRESSIONS icon.

The DIGIT ON or OFF icon selects an image that is frozen or moving... if you have just entered VIDEOFX coming from GRAF 65000, and have (say) a graphic image on the screen, this graphic image would remain 'behind' the compression window (uncompressed) until the digitizing is started (by switching DIGIT ON).

Click this icon so that DIGIT ON is selected.

Click the FRAME OFF/ON icon to select frame ON... (a color palette icon will appear... for choosing a new frame color).

Click in the black area to exit from the menu...

While keeping the tip pressed down, move the pen over the tablet... the compression window will follow.

Note that the compression window can be moved partially or completely outside the screen display area.

Changing the size of the window

While keeping the tip of the pen pressed down, press the BUTTON on the barrel of the pen.
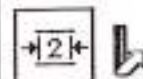
Move the pen (without releasing)...

- to the right to increase the width
- to the left to decrease the width
- toward the bottom to increase the height
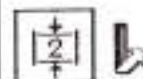- toward the top to decrease the height.

Setting a different compression ratio

Click at the bottom of the screen to call the menu...

Click the HORIZONTAL RATIO icon... the ratio displayed within the icon changes from 2 to 4.

Click the VERTICAL RATIO icon... the ratio displayed within the icon changes from 2 to 4.

Note that horizontal and vertical compression ratios ranging from 2 (1/2 size) to 8 (1/8 size) are available.

Exit from the menu (by clicking in the black area) and try out the new compression ratio that has been set.

Note that a mosaic effect can be selected (WITHIN the window) by clicking the MOSAIC option at the base of the menu... this will be mentioned later together with the FULL SCREEN MOSAIC function (since the procedures for manipulating the effects are identical).

Full screen mosaic effect
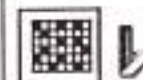
Call the main menu and click the MOSAIC function icon (this is a blue icon).

Make sure that DIGIT ON is showing... then exit from the menu (by clicking in the BLACK area).

Move the pen to the top left corner of the tablet and click the tip (keep it depressed).

Slide the pen slowly and smoothly (keeping the tip depressed) from top left to bottom right.

The mosaic effect increases horizontally as the pen moves toward the right of the tablet and vertically as the pen moves toward the base of the tablet.

toward the right

toward the bottom   toward right and bottom

Kaleidoscope effect

Call the main menu and click the KALEIDOSCOPE function icon (this is a blue icon).

Make sure that DIGIT ON is showing... then exit from the menu (by clicking in the BLACK area).
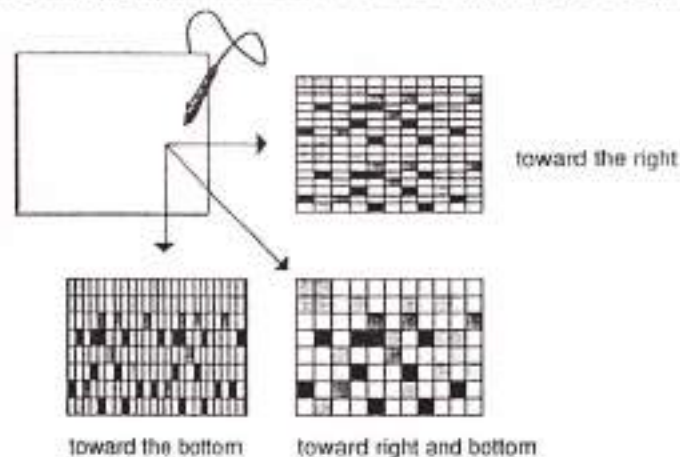
Move the pen to the top left corner of the tablet and click the tip (keep it depressed).

Slide the pen slowly and smoothly (keeping the tip depressed) from top left to bottom right.

Move the pen to different positions on the tablet (keeping the tip depressed) and observe the different effects produced (the manipulation is identical to that for the MOSAIC function).

Memorizing the effect
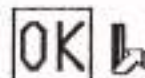
The current image (treated by either KALEIDOSCOPE or MOSAIC) can be validated for use as a graphic image by clicking the OK icon at the base of the menu.
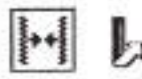

Slides

Call the menu and click the WIPE functions icon.

Click the SLIDE icon... a selection of 13 slides is presented at the base of the menu.

Select one of the slides... in this slide the destination image is split vertically into two halves which slide toward the edges of the screen.

Executing the slide

Click the EXECUTION icon (a lever)... the 'control panel' menu is displayed on the screen.

SPEED : 01

DIG   SPD MAN REV GO BOR COL

Click the DIG icon to set the DIGITIZING ON.

REV → Click the REVERSE icon... the left and right halves of the image split in the middle and slide toward the left and right.

GO → Click the GO icon... the left and right halves of the destination image slide back to meet in the middle of the screen.

Manual slide

MAN → Click the MANUAL icon... it is now displayed in reverse.

REV ⇩ Click the REVERSE icon (keeping the tip of the pen depressed)... the two halves of the image slide toward the sides...

→ Release the tip of the pen... the slide halts.

Changing the slide speed

SPD → Click the SPEED icon... a red bar appears at the base of the screen.

SPEED : 01

⇩ Click the pen in the centre of the tablet (keeping the tip depressed) and slide the pen to the left... then to the right... the speed (indicated) is increased as you move right and decreased as you move left... a white bar scans left to right to simulate a slide at the indicated speed.

OK → Click the OK icon to validate the new speed... the control panel returns.

→ Call the main menu (by clicking the EXIT icon).

Colorized digitizing

COLOR → Click the COLOR functions icon...

DIGIT → Click the COLORIZED DIGITIZING icon... the screen is 'swept' and a new sub-menu appears...

DIGIT OFF | 64 LEVELS | palette | palette | grid | END

Setting the number of digitizing levels

DIGIT ON → Select DIGIT ON... the moving image appears behind the sub-menu.

64 LEVELS → Click the LEVELS icon... the number of levels is displayed within the icon... each click reduces the number of levels by half... select (say) 16 levels.
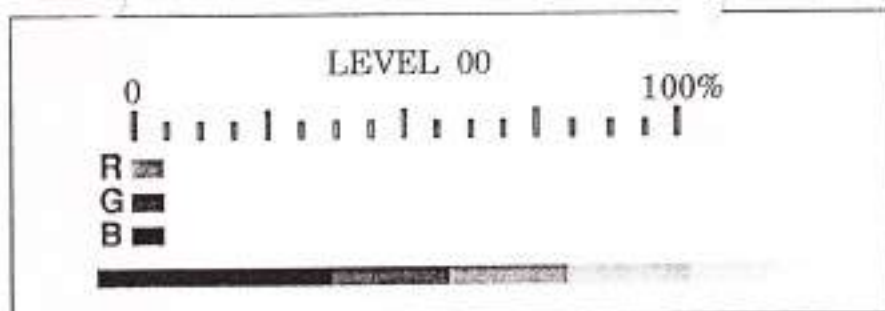
Setting new colors for each level

palette → Click the PALETTE icon... a new sub-menu appears...

EXIT | RGB | palette | 1 palette | B&W | SAVE | LOAD

RGB → Click the RGB icon.

LEVEL 00

0   100%

R
G
B

The RGB color bars are displayed...

... and a palette (just below) displays all the levels present (in this case 16 digitizing levels). This is the grey scale palette.

... click the cursor on a point of your image (or on the color palette)... the level number at that point is indicated above the bars, and the red, green and blue components for that level are displayed.

R
G
B

Click the pen over the RIGHT edge of one of the bars (R, G or B) and (KEEPING the tip depressed) slide the pen to the left... then the right...

... the color assigned to the digitizing level on which you clicked changes (in the palette at the base of the screen and in the image itself).

... click the cursor on another point of the image or palette (another level) and repeat the above procedure. You can redefine the colors for all the levels in this way.

Click the EXIT icon to return to the sub-menu.

Creating a palette of gradations

Click the GRADATION icon... the palette is displayed at the base of the screen, and a message appears...

START LEVEL = ...

A small cross-shaped cursor appears... ■ ...move the pen over your image... the level beneath the cursor is indicated within the message.

Click-release over the grey level chosen for the start of the gradation (on the palette or the image).

A new message appears...

END LEVEL = ...

Click-release over the grey level chosen for the end of the gradation (on the palette or the image).

color gradation

A gradation is created between the two points selected. Using this procedure you can create several gradations within the same palette.

The three palettes

There are three palettes held in memory at any one time by VIDEOFX 1. By default the first is a gradation of greys, the second a 'negative' version of the first, and the third consists of gradations of different hues. Each of these can be reprogrammed as already described.

Switch between the three palettes by clicking this icon.
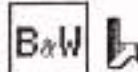
Forcing a black-white palette

The digitizing levels palette can be reprogrammed as described previously... you can also 'force' a palette of greys for the current palette (as in the default state of the first palette) by clicking the BLACK & WHITE icon.

Saving a palette to disk

Ensure that there is a prepared disk in the MEMORY EXTENSION 1/DISK... then click the SAVE icon.

Name of palette to save :

Type a name for the palette...

... and press RETURN... the currently selected palette is saved to disk...

Palette saved

Click the pen to return to the menu.

Loading a palette from disk

Ensure that there is a prepared disk in the MEMORY EXTENSION 1/DISK... then click the LOAD icon.

A list of the palettes on disk appears... move the rectangular cursor over the palette you want to load and click the pen on the tablet... the palette is loaded...

Palette restored

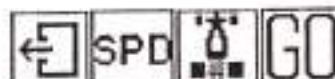Click the pen to return to the menu.

Cycling colors

Click the EXIT icon to return to the previous sub-menu.

Click the CYCLE PALETTE icon... a new sub-menu appears...

Click the SPEED icon... select the speed as you did previously for the SLIDES function... select a speed of around 9 or 10.

Click the GO icon... the colors assigned to the palette of digitizing levels begin to cycle.

Click the pen on the tablet to stop the color cycling effect.

Note that this effect is most spectacular when used with gradated palettes at high speed and with a high number of digitizing levels.

Step by step

Click at the base of the tablet to return to the sub-menu, then click the CONTINUOUS/STEP BY STEP icon... a set of footprints is now displayed in place of the racing car.

Click the GO icon... each time you click the colors'in your image are rotated by ONE level. Continue clicking to move through the cycle step by step.

Memorizing the effect

Click the EXIT icon to return to the previous sub-menu.

Click the END icon... the current image is memorized for use as a graphic image (or saving to disk, treatment by GRAF 65000 etc...). The main menu returns.

Memory plane wipe effects

This function performs a wipe effect between the current screen image and an image stored in one of the memory planes.

Click the GRAF 65000 icon at the top of the menu.

Click the MEMORY PLANE functions icon from the GRAF 65000 menu.

Click the SAVE TO MEMORY icon... the current screen image is now stored in a memory plane.

Clear the screen... then use the DRAWING functions of GRAF 65000 to create a completely new image (see the GRAF 65000 manual for further details)...

... and save that image to a memory plane as well...

Call VIDEOFX 1 once more by clicking the icon at the top of the menu...

Click the MEMORY PLANE WIPE functions icon (magenta) from the VIDEOFX 1 menu...

An identical (blue) icon appears in the functions zone of the menu... click that icon...

... the menu disappears and a miniature representation of the two images you have stored in the memory planes is superimposed over the screen image.

Click the FIRST image that you saved to memory...
... a new sub-menu appears at the base of the screen representing the available selection of wipes...

Click the RANDOM wipe icon.

Click GO... the image from memory plane 1 appears in a series of blocks placed 'randomly' over the original image until the whole screen is filled.

Click the (blue) MEMORY PLANE WIPE icon once more... and select the SECOND memory plane image.

When the wipe options appear select one of the spiral wipes...

... then click the GO icon... the image from the second memory plane appears... spiraling from the edges of the screen toward the centre until the screen is filled.
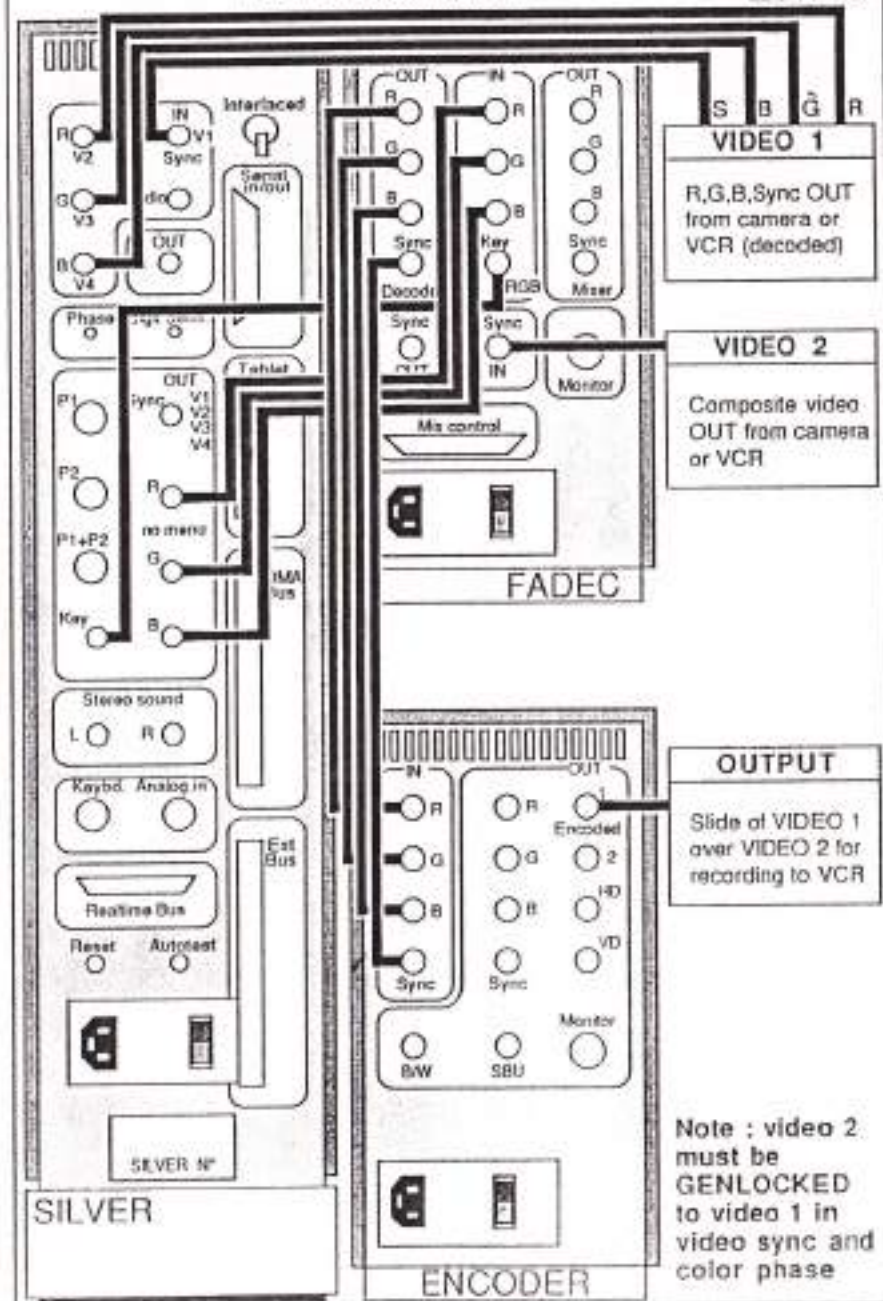
Chapter 3 - quick reference section

Quick reference section

Extra memory is required in order to use the MEMORY PLANE functions (MEMORY PLANE WIPE EFFECTS). The MEMORY EXTENSION 1/DISK (DG-150) or the MEMORY EXTENSION 2 (DG-155) must be connected to the system. Of course you will need the EXTENSION 1 (DG-150) if you wish to save the COLORIZING palettes to disk. Functions requiring extra memory are marked **M**
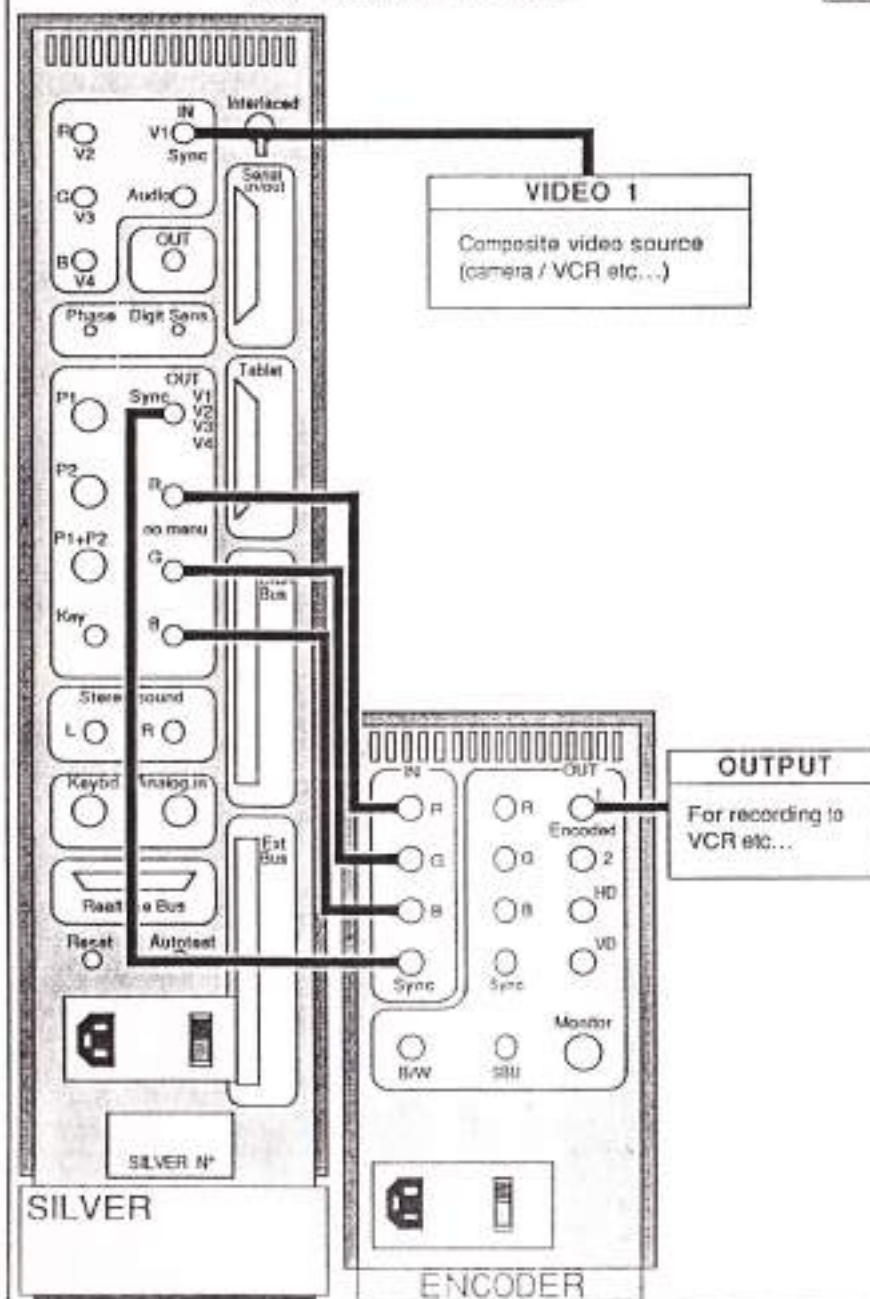
Function	Description	Icon
Assign colors	During the colorized digitizing effects this option allows colors to be mixed (using Red, Green and Blue sliders) and assigned to the palette of digitizing levels (via the palette or the digitized image itself).	
Border	Displays a border between the two images when performing video SLIDES... when the border is enabled a palette icon is displayed and the border color can be redefined by means of RGB sliders.	OFF
Clear screen	The DUSTBIN icon is used for clearing the screen in the color defined for the background. On clicking this icon, you are given the option to select a new background color before clearing the screen.	
Color functions	This is the function type where you will find the COLORIZED DIGITIZING EFFECTS function.	COLOR
Color gradations	Creates a gradation of colors between any two points within the current palette used for COLORIZING DIGITIZING. The two colors can be indicated within the palette or within the digitized image itself.	
Colorized digitizing effects	This function will digitize an image using between 2 and 64 gray levels. Numerous effects can then be performed in real time... such as assigning colors to each level, creating gradations, cycling colors, mosaics, kaleidoscope effects etc... The image can be memorized for further treatments as a graphic image (using GRAF 65000 etc...).	DIGIT
Compressed digitizing	Compressed digitized images displayed in real time within a window which can be moved around (or even off) the screen.	
Compression ratio (horizontal)	Horizontal and vertical ratios for COMPRESSED DIGITIZING are selectable independently... (1/2, 1/4, 1/8 normal size). Click this icon to step through the HORIZONTAL ratios available.	
Compression ratio (vertical)	Horizontal and vertical ratios for COMPRESSED DIGITIZING are selectable independently... (1/2, 1/4, 1/8 normal size). Click this icon to step through the VERTICAL ratios available.	

Connection (1)

This connection diagram applies to the GEOMETRIC and WIPE functions of VIDEOFX 1.

VIDEO 1
R,G,B,Sync OUT from camera or VCR (decoded)

VIDEO 2
Composite video OUT from camera or VCR

FADEC

SILVER

ENCODER

OUTPUT
Slide of VIDEO 1 over VIDEO 2 for recording to VCR

Note : video 2 must be GENLOCKED to video 1 in video sync and color phase

Connection (2)

This connection diagram applies to the COLOR type functions (COLORIZED DIGITIZING EFFECTS).

VIDEO 1
Composite video source (camera / VCR etc...)

OUTPUT
For recording to VCR etc...

SILVER

ENCODER

|	
Continuous / step by step	The COLOR CYCLING effect (COLORIZED DIGITIZING) can be displayed in continuous rotation or stepped through one level at a time (clicking the pen on the GO icon for each step). Select which mode to use by clicking this icon (a racing car or a set of footprints indicates the current mode).
Cycle color	The palette of colors (defined or default) used within the digitized image (COLORIZED DIGITIZING EFFECTS) can be cycled in continuous motion or step by step. Try using default palette n° 3 with a cycle speed of around 10.
Digitizing on/off	Click this icon to select whether the current graphic image is used (frozen) or a new image (moving) is digitized.
Digitizing levels	For the COLORIZED DIGITIZING function the number of digitizing levels used can be changed by clicking this icon. The current number of levels is displayed within the icon (between 2 and 64 levels).
End (memorize)	After performing real time colorizing effects you can exit from the function and memorize the screen image (for use as a graphic image and treatment by GRAF 65000 etc.) by clicking this icon.
Execute slide	The LEVER function presents a 'control panel' sub-menu for the execution of the selected SLIDE. Options offered are DIGITIZE ON/OFF, SPEED, MANUAL/AUTO, REVERSE, GO and a BORDER option with definable color.
Exit	Click this icon to exit from the function (with or without having made any selections or modifications).
Force B&W palette	The three default palettes for the COLORIZED DIGITIZING EFFECTS are all redefinable. You can force the current palette to be replaced by a grey scale palette by clicking this icon (the previous palette colors will be destroyed).
Frame on/off	A frame may be displayed around the COMPRESSED DIGITIZED image by validating FRAME ON... the color of the frame may be redefined.
Geometric functions	This group contains COMPRESSED DIGITIZING, MOSAIC and KALEIDOSCOPE functions
Kaleidoscope	This function which produces a real time kaleidoscope effect also appears as an option within other functions.
Load palette	A palette defined for the COLORIZED DIGITIZING EFFECTS which has been previously saved to disk can be loaded as the current palette using this option.

Manual	This icon appears in the 'control panel' for EXECUTION of SLIDES. When MANUAL mode is selected (the icon is displayed in reverse) the slide will execute while the pen tip is depressed (on REVERSE or GO) and will halt when the tip is released.	MAN
Memory plane wipes	ⓜ This function performs one of a selection of five wipe effects between the current screen image and a graphic image stored in one of the memory planes (see GRAF 65000 manual for details). The following wipes are offered...	

Mosaic function	This function which produces a real time mosaic effect also appears as an option within other functions.	
OK option	The OK option serves to validate a modification (RGB mixer for color modifications) or to memorize the current image (KALEIDOSCOPE and MOSAIC functions).	OK
Palette options	During the COLORIZED DIGITIZING function this icon gives access to a sub-menu for modifying the color palettes used... (creating gradations, assigning new colors, swapping palettes, saving and loading to disk...).	
Reverse	(As opposed to GO) this icon (from the EXECUTE SLIDE 'control panel') executes the slide in reverse.	REV
Save palette	ⓜ A palette defined for the COLORIZED DIGITIZING EFFECTS can be saved to disk using this option.	SAVE
Slides	This function offers a selection of thirteen SLIDE effects...	SLIDE

Speed	The speed of execution for SLIDE or for COLOR CYCLING can be modified by clicking this icon.	SPD
Swap palette	Selects one of the three palettes for use as the current palette during the COLORIZED DIGITIZING function.	
Video ON/OFF	This function allows a live video image (input at V1) to be displayed inlayed within the defined background color. Note: this function not available for NTSC (US) and necessitates a monitor with SCART EUROCONNECTOR.	VIDEO ON/OFF
Wipe functions	This function type contains the SLIDE EFFECTS function	WIPE